A300

with FREE DIVE MODE

A300 XT

with ANALOG PRESSURE GAUGE

DIVE COMPUTER

OPERATING MANUAL

CONTENTS

Welcome

to

AERIS

and

THANK YOU

for choosing the

A300 / A300 XT

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PATENT NOTICE
U.S. Patents have been issued, or applied for, to protect the following design features: Data Sensing and Processing Device (U.S. Patent no. 4,882,678), Ascent Rate Meter (U.S. Patent no. 5,156,055), Scuba Air Device (U.S. Patent no. 6,201,478). Other patents pending. User Setable Display (U.S. Patent no. 5,845,235) is owned by Suunto Oy (Finland).

LIMITED TWO-YEAR WARRANTY
For details, refer to the Product Warranty Registration Card provided. Register on-line at www.diveaeris.com

DECOMPRESSION MODEL
The programs within the A300 and A300 XT simulate the absorption of nitrogen into the body by using a mathematical model. This model is merely a way to apply a limited set of data to a large range of experiences. The dive computer model is based upon the latest research and experiments in decompression theory. **Still, using the A300 or A300 XT, just as using the U.S. Navy (or other) No Decompression Tables, is no guarantee of avoiding decompression sickness, i.e. "the bends."** Every diver's physiology is different, and can even vary from day to day. No machine can predict how your body will react to a particular dive profile.

FEATURES

AND

FUNCTIONS

(Also see Dive Mode Features, page 21.)

DISPLAY ICONS

SET = Safety Stop

--- Safety Stop

--- Deco Stop

--- Go Down to Stop

--- Go Up to Stop

--- Go Up

Icons:
SET =   Setting Mode
FLY =   Time to Fly
Battery = Low Voltage
O2% =   % of O2 saturation
CF =   Conservative Factor is on
Z+ =   Algorithm selected
DSAT =   Algorithm selected
M, FT =   Depth units
MAX =   Max Depth

FO2 =   value is FO2 setting
=   Dive recently conducted
SAT =   Time to Desaturate
PO2 =   value is PO2 level
TAT =   Total Deco Ascent Time
SS =   Safety Stop
M, FT =   Depth units
O2 =   O2 Time Remaining

NX =   FO2 is set for Nitrox
LAST =   Data is for the Last dive
STOP =   Stop Depth required

--- Time

--- Surface Interval

--- Plan Mode

--- Elapsed Dive Time

--- NDC Time

--- Deco Stop Time

OVERVIEW

The A300 model features FREE Dive mode as well as NORM, TECH, and GAUG modes.

The A300xt model features a Tank Pressure alarm (actuated by an reed switch) for an analog pressure gauge mounted in the same console as the dive computer module.

NORM mode is intended for the casual diver who plans to use a single gas and does not yet wish to configure the numerous settings and alarms, many are factory set at predetermined fixed values.

TECH mode allows the user to configure all settings and alarm values using the control buttons or PCI program, and set up and switch between multiple gasses.

GAUG mode is for those using the units as digital gauges with no Ni-O2 calculations.

FREE mode (A300 only) is for those using the unit for breath hold activities without scuba.

ACTIVATION & DIAGNOSTICS

A momentary press/release of any button will activate the unit. It will not activate at a depth deeper than 5 FT (1.5 M) or at an Altitude higher than 14,000 feet.

The unit has contacts that will cause it to activate and enter Dive Mode upon descent to 5 FT (1.5 M) for 5 seconds.

> The contacts are the buttons and the pins of the PCI (PC Interface) data port. Conductivity between any button and any pin (being wet) will satisfy the activation bridge.

Upon wake up, the unit will check for depth once per second. If depth is not sensed within 10 minutes, it will enter PSM (Power Saver Mode). Once a dive is made, it will continue checking for depth until the Time to Fly and Time to Desaturate counters reach 0:00 (hr:min), 24 hours post dive max, and the unit shuts Off.

Immediately following manual (push button) activation (not if by wet activation), all segments of the LCD are displayed (Fig. 1) followed by a countdown from 8, -, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0 (approx 3 sec). If sensor readings and battery voltage are within tolerance, the NORM Surface Main screen is displayed (Fig. 2).

> If any value is not acceptable, the failure description will flash for 5 seconds for each type failure. If more than one failure is sensed, the failures will be presented sequentially in the following order.

>> EEP >> Eeprom error; CAL >> Calibration error; ALT >> higher than 14000 feet or deeper than 5 feet; BAT >> Battery voltage too low (icon flashing); A-D >> A/d over range

Once the unit is activated, regardless of what mode it is in, it will enter the selected Dive Mode upon descent to 5 FT (1.5 M) for 5 seconds.

By accessing the Set OP MOD selection (Fig. 3) in the SET group, the Operating Mode can be changed from NORM to TECH, GAUG, or FREE (A300 only).

> Once a mode is selected, operation remains in that mode until changed.

> Once a dive is made in GAUG mode, operation locks into GAUG for 24 hours after surfacing.

While the Surface Main screen is displayed, access to other modes and screens is allowed. They will remain on display for 2 minutes or until a button is pressed to access another mode or screen.
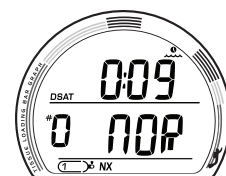
Fig. 1 - DIAGNOSTIC

Fig. 2 - NORM SURF MAIN

Fig. 3 - TO ACCESS SET OPERATING MODE

AUDIBLE ALARM
While operating in NOR, TEC, or GAU mode, the Audible will emit 1 beep per second for 10 seconds when alarms strike, unless it is set Off. During that time, the Audible can be acknowledged and silenced by pressing the S button (less than 2 seconds).

An LED Warning Light, on the housing, is synchronized with the Audible and flashes as the Audible sounds. It will turn Off when the Alarm is silenced. The Audible and LED will not be active if the Audible is set OFF (a group A setting).

Situations that will activate the 10 second Alarm include -
* Items apply only in NORM/TECH modes.*
** Items apply only in TECH mode.*

- Low Pressure, at 500 PSI (35 BAR) (A300 XT only).
- Descent deeper than the Depth Alarm Set Point.
- Dive Time Remaining at the Set Point**.
- Elapsed Dive Time at the Set Point.
- PO2 (for Gas in use) level at .20 < Set Point and again at the Set Point**.
- O2 accumulation at 240 OTU (80%), then again at 300 OTU (100%)**.
- TLBG at the Set Point**.
- Ascent Rate exceeds 60 FPM (18 MPM) when deeper than 60 FT (18 M), or 30 FPM (9 MPM) at 60 FT (18 M) and shallower.
- Entry into Decompression Mode (Deco)**.
- Conditional Violation (above a required Deco Stop Depth < 5 minutes)**.
- Delayed Violation (above a required Deco Stop Depth => 5 minutes)**.
- Delayed Violation (a Deco Stop Depth > 60 FT/18 M is required)**.
- Delayed Violation (Depth > 330 FT/100 M in NORM/TECH, > 400 FT/120 M in GAUG).
- A Gas Switch would expose the diver to PO2 => 1.60 ATA***.

A single short beep (which cannot be disabled) sounds when -
- After 5 minutes on the surface after the Violation dive.

3 short beeps sound when -
- Ascent Rate is 51 to 60 FPM (15.1 to 18 MPM) when deeper than 60 FT (18 M), or 26 to 30 FPM (7.5 to 9 MPM) at 60 FT (18 M) and shallower.
- FREE - Elapsed Dive Time every 30 seconds during dive.
- FREE - descent deeper than the Depth Alarm Set Points (1, 2, 3).
- FREE - Delayed Violation (Depth > 330 FT/100 M).
- FREE - CDT counts down to 0:00.
- FREE - TLBG at 14 segments.
- FREE - Violation, entry into Deco.

During the following situations, the audible will not turn off when acknowledged -
- Delayed Violations.
- Deco Stop Depth Violation => 70 FT/21 M stop required.
- FREE mode alarms.

PC INTERFACE
Interface with a PC, to allow uploading settings and downloading data, is accomplished by connecting the unit to a PC USB Port using the special USB Interface Cable.

The software program together with the USB Driver required is on the ACI (AERIS Computer Interface) CD, and can be downloaded from the AERIS web site. The program's HELP** serves as the user manual which can be printed for personal use.

   **Prior to attempting to Download data from your unit or Upload Settings to it, review the HELP section of the ACI program. Recommended is to print those sections of HELP that you consider appropriate for your Interface activities.

The Settings Upload portion of the ACI program can be used to set/change the Set Alarms group, Set Utilities group (Utilities), Set Time, etc. using the same Interface System. FO2 related items must be set using the control buttons.

Information available for retrieval (download) from the unit to the PC Download portion of the program includes dive data such as number, surface interval time, maximum depth, elapsed dive time, no deco status, start date/time, lowest temperature under water, sampling rate, dive profile, and Set Points.

The ACI program also allows upgrade of select versions of the unit's firmware (operating system software) after which the unit resets all operating data. Since the upgrades require reset of the unit, they are blocked during 24 hours after dives.

POWER SUPPLY
- Battery >> (1) 3 vdc, CR2450, Lithium.
- Shelf life >> up to 5 years.
- Use life >> 100 dive hours if (1) 1 hour dive per dive day up to 300 dive hours if (3) 1 hour dives per dive day.
- Use life >> 300 dive hours if (2) 1 hour dives per dive day.
- Replacement >> by user (annual recommended).

BATTERY STATUS INDICATION

- Warning >> icon on solid (Fig. 4a) when < 2.75 volts, battery change recommended.
- Alarm >> icon on flashing (Fig. 5) when < 2.50 volts, change the battery.

When the voltage is below that required for normal operation (< 2.50 volts), the graphics CHG and BAT will alternate and the Battery icon (shell only with no inner bar) will flash once per second for 5 seconds, then the unit will shut off.

The Backlight will be disabled and not activate (on the surface or during the dive) when Battery voltage is below the warning level (< 2.75 volts).

If a Low Battery Warning condition (< 2.75 volts) occurs during a dive, the system will continue to operate with normal displays and functions throughout that dive.

The Low Battery icon will not be displayed during dives (underwater). It will be displayed when the unit enters Surface Mode.

If a Low Battery Alarm condition (< 2.50 volts) occured during the dive, the graphics CHG and BAT will alternate after 10 minutes on the surface, then the unit will shut Off.
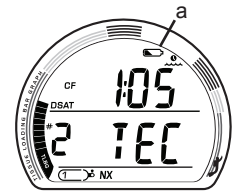

Fig. 4 - LOW BATTERY WARNING

Fig. 5 - LOW BATTERY ALARM (after surfacing)

LOW BATTERY WHILE ON THE SURFACE

<= 2.75 volts (warning level)
- Backlight is completely disabled.
- Battery icon (shell with inner bar) appears solid.
- If a dive is started, the icon is not displayed on the dive mode screens.
- All functions continue to be available.

<=2.50 volts (Too Low - alarm level)
- Battery icon (shell only) will flash for 5 seconds then the unit shuts off completely.

LOW BATTERY DURING A DIVE

<= 2.75 volts (warning level)
- Backlight is completely disabled.
- All other functions continue to be available.
- Battery icon is not displayed on the dive mode screens.
- Battery icon (shell with inner bar) appears solid upon entry into Surface Mode.

<= 2.50 volts (Too Low - alarm level)
- Backlight is completely disabled.
- All other functions continue to be available during the dive.
- Battery icon is not displayed on the dive mode screens.
- Upon surfacing, the Battery icon (shell only) flashes and the graphics CHG and BAT alternate for 10 minutes, then the unit shuts Off completely.

BATTERY CHANGE

While the battery is being replaced, calculations and Set Points will be held in non volatile memory. Time and Date may need to be adjusted after the battery is installed.

PSM (POWER SAVER MODE)

Once 10 minutes elapse while the unit is activated and on the surface prior to conducting any dives, or once 10 minutes elapse after the post dive transition period* has ended, the unit enters PSM (Power Saver Mode).

PSM turns the display off (Fig. 6) until a button is pressed at which time it turns back on.

During the time that the screen is off, all operations continue as normal in the background with current updated information displayed as soon as the screen comes on again.

Fig. 6 - PSM

*Transition Period (upon surfacing) -
- Operation shifts from Dive Mode to Surface Mode upon ascent to 2 FT (0.6 M) for 1 second.
- Making a descent during the first 10 minutes after surfacing from a NORM, TECH, or GAUG dive is a continuation of that dive; or the first minute after surfacing from a FREE dive (A300 only).
- A descent made after the 10 minute (or 1 minute) interval has elapsed is then considered a new dive.
- During the first 10 minutes (or 1 minute) after surfacing, the Surface Main screen will be displayed with Surface Interval time. Surface ALTs can be accessed to view other information pertaining to that dive.
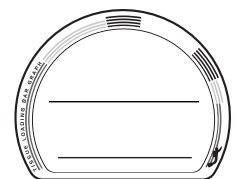
NORM/TECH

SURFACE MODES

NORM/TECH SURFACE MODE

The SURF MAIN screen of the mode selected will remain on display for 10 minutes during which time the unit will enter that type Dive Mode upon descent to 5 FT (1.5 M) for 5 seconds.

The unit will enter Post Dive Surface Mode for that Mode upon ascent to 2 FT (0.6 M) for 1 second and display the Surface Main with the Surface Mode (clock/wave) icon flashing.

Access to SURF ALT screens is allowed during the first 10 minutes with access to other surface modes/screens blocked until 10 minutes elapse. *Exception is for Violations.*

When the 10 minute post dive surface Interval time has elapsed, access to other Surface modes/screens is allowed. If another 10 minutes of no action elapses, operation will enter PSM.

NORM/TECH SURFACE SEQUENCE

Sequence >> SURF MAIN >> ALT 1 > ALT 2 > ALT 3 > FLY/DESAT > PLAN > LOG > SET > HIST > ID.

- A (< 2 sec) to step forward through the Surface sequence.
- A (hold) to scroll forward through the Surface sequence (4/sec).
- M (< 2 sec) to step back through the Surface sequence.
- S (< 2 sec) to access selections.
- S (2 sec) to step back from a selection to the previous selection or sequence item.
- M (2 sec), or if no button is pressed during a period of 2 minutes, to revert to SURF MAIN*.
- S (press) to activate the Smartglo Backlight.

ALTs revert to the Main after 10 seconds of no button action.

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Some of the descriptions that follow only apply to TECH mode.

Some are also shared by GAUG and FREE modes, which will be referenced back in those sections.

NORM/TECH SURF MAIN, information includes (Fig. 7, 8):
> SI (hr:min) with clock/wave icon; if no dive yet, this is time since activation.
> Dive number with # icon; that operating period, up to 24 (0 if no dive made yet).
> Graphic NOR or TEC (operating mode).
> Battery icon, if voltage is low.
> CF icon, if set On.
> Z+ or DSAT icon, the algorithm selected.
> Gas 1 (tank) icon; start gas, default gas 10 minutes after a dive.
> NX icon, if FO2 is set for Nitrox.
> TLBG with icon, if any nitrogen after dives.

- A (< 2 sec) to step forward to ALT 1, then step through the Surface Sequence.
- A (hold) to scroll forward through the Sequence (4/sec).
- M (< 2 sec) to access ID-SN, then step back through the Sequence.
- S (press) to activate Smartglo Backlight.

NORM/TECH SURF ALT 1, information includes (Fig. 9):
> Max Depth* with FT (or M) and MAX icons.
> Elapsed Dive Time* (hr:min) with wave/clock icon.
> LAST icon, indicating that data is from the dive previously conducted.

- A (< 2 sec) to step forward to ALT 2.
- M (< 2 sec) to step back to Main.
- 10 sec, or M (2 sec), revert to Main.
- S (press) to activate Backlight.

Dashes if no previous dive.

NORM/TECH SURF ALT 2, information includes (Fig. 10):
> Time of Day (hr:min) with AM (or PM) icon, no icon if 24 hour format.
> Temperature with °F (or °C) icon.
> Altitude level graphic, if L2 (to L7), blank if Sea level.

- A (< 2 sec) to step forward to ALT 3 (if Nitrox), or access FLY (if Air).
- M (< 2 sec) to step back to ALT 1.
- 10 sec, or M (2 sec), revert to Main.
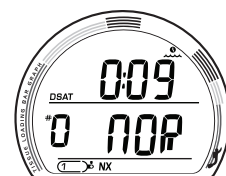- S (press) to activate Backlight.

Fig. 7 - NORM SURF MAIN
(no dive yet, set for Nitrox)

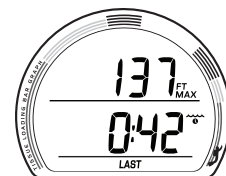Fig. 8 - TECH SURF MAIN
(after dive 2)
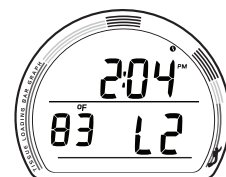

Fig. 9 - NORM/TECH
SURF ALT 1

Fig. 10 - NORM/TECH
SURF ALT 2

NORM/TECH SURF ALT 3 (only if Nitrox, no screen if Air), information includes (Fig. 11):
> Current O2% saturation with icon.
> Current FO2 set for Gas 1 with FO2, Gas 1, & NX icons.
> Current PO2 alarm value set for Gas 1 with icon, fixed at 1.40 if NORM.

- A (< 2 sec) to step forward to FLY.
- M (< 2 sec) to step back to ALT 2.
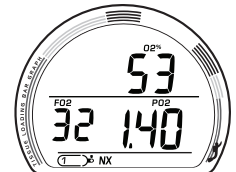- 10 sec, or M (2 sec), revert to Main.
- S (press) to activate Backlight.

Fig. 11 - NORM/TECH
SURF ALT 3

- - - - - - - - - -

During the first 10 minutes on the surface after a dive, the ALTs can be accessed, other screens cannot.

- - - - - - - - - -

FLY/DESAT
FLY Time is a count down timer that begins counting down 10 minutes after surfacing from a dive from 23:50 to 0:00 (hr:min).

DESAT Time, also a count down timer, provides calculated time for tissue desaturation at sea level taking into consideration the Algorithm used and the Conservation Factor setting.

DESAT Time also begins counting down 10 minutes after surfacing from a NORM dive, counting down from 23:50 (max), usually much less, to 0:00 (hr:min).

When the DESAT time reaches 0:00, which will generally occur prior to the FLY count down reaching 0:00, it will remain on the display until the FLY count down reaches 0:00.

> Desaturation requiring times greater than 24 hours will display 23: - - .
> In the event that Time to Desaturate still remains at the end of 24 hours, the added time will be zeroed.
> When other screens are accessed, the FLY and DESAT countdowns continue in the background.

Fly/Desat, information includes (Fig. 12):
> Time to Fly countdown (hr:min) with FLY and clock (time) icons, dashes if no dive yet.
> Time to Desaturate countdown (hr:min) with SAT and clock (time) icons, dashes if no dive yet or a Violation dive, blank after a GAUG dive.

- A (< 2 sec) to step forward to Plan Lead-in.
- M (< 2 sec) to step back to ALT 3 if Nitrox, or to ALT 2 if Air.
- 2 minutes, or M (2 sec), revert to Main.
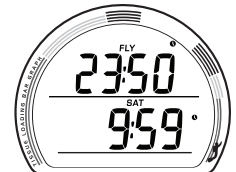- S (press) to activate Backlight.

Fig. 12 - FLY/DESAT

NORM/TECH PLAN MODE
No Deco time Limits (NDLs) and O2 time Limits (OTLs) in Plan Mode are based on the Algorithm selected (DSAT or Z+), the FO2 set for Gas 1, and residual nitrogen (or O2) remaining from previous dives. FO2 set for Gas 2 or 3 (TECH only) are not used for Plan calculations.

PDPS (Pre Dive Planning Sequence)
Plan screens will sequence through Depths from 30 to 190 FT (9 to 57 M), or the Max Depth that will allow theoretical No Deco Dive Time of at least 1 minute based upon the previous dive profiles in a series of repetitive dives and taking into account descent and ascent rates of 60 FPM (18 MPM).

When the Conservative Factor is set On, NDLs are reduced to the values of the next 3,000 foot (915 meter) higher Altitude. Refer to tables in back.

Fig. 13 - PLAN LEAD-IN
(Gas 1 set for Air)

Plan Lead-in, information includes (Fig. 13, 14):
> Z+ (or DSAT), CF, NX icons, if they apply.
> Graphic PLAN if Air, or -
  Max Depth allowed for Gas 1 FO2 setting with FT (or M) and MAX icons if Nitrox.
> Graphic AIR with FO2 and Gas 1 icons, or -
  FO2 set for Gas 1 (xx%) with FO2 icon, and PO2 alarm setting (x.xx ATA) with PO2 icon if Nitrox.
> Plan mode icon (wave/clock/profile).

- S (< 2 sec) to access PDPS.
- A (< 2 sec) to forward to Log Lead-in.
- M (< 2 sec) to step back to Fly/Dsat.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 14 - PLAN LEAD-IN
(Gas 1 set for Nitrox)

PDPS, information includes (Fig. 15, 16):
> Z+ (or DSAT), CF, NX icons, if they apply.
> Plan Depth value with FT (or M) icon.
> FO2 set for Gas 1 (xx%) with FO2 icon if Nitrox, blank if Air.
> NDC (No Deco) or O2 limit (hr:min) with mode icon (wave/clock/profile, with O2 if OTL.
> Gas (tank) 1 icon.
> Plan mode icon (wave/clock/profile).

- S (2 sec), while viewing the first screen, to step back to Plan Lead-in.
- A (hold) to scroll forward through screens at a rate of 8 per second increasing planned Depth from 30 to 190 FT (9 to 57 M) in increments of 10 FT (3 M).
- A (< 2 sec) to step forward through screens.
- M (< 2 sec) to step back through screens.
- S (< 2 sec), at any time, revert to Plan Lead-in.
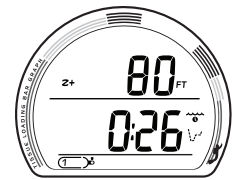- 2 minutes, or M (2 sec), revert to Main.

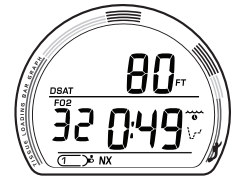Fig. 15 - PDPS
(Gas 1 set for Air)

Fig. 16 - PDPS
(Gas 1 set for Nitrox)

LOG MODE

Information from the latest 24 NORM, TECH, and/or GAUG dives is stored for viewing. After exceeding 24 dives, the most recent dive is stored while the oldest is deleted.

> Dives are numbered from 1 to 24 starting each time a Dive Mode is activated. After 24 hours elapse with no dive, the first dive of the next period of operation is #1.
> 10 minutes after a dive, the Log screens for all dives stored can be viewed.

If a dive's elapsed time (EDT) exceeds 9:59 (hr:min), data at the 9:59 interval is recorded in the Log upon surfacing of the unit.

Log sequence = Lead-in > Preview > Data 1 > Data 2 > Data 3 > Data 4.

Log Lead-in, information includes (Fig. 17):
> Graphics Go To LOG.

- S (< 2 sec) to access the Log Preview screen, of the most recent dive recorded.
- A (< 2 sec) to step forward to Set Lead-in.
- M (< 2 sec) to step back to Plan Lead-in if NORM or TECH, or to Fly if GAUG.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 17 - LOG LEAD-IN

Log Preview, information includes (Fig. 18):
> Graphics NONE and YET if no dive recorded yet, or -
Date (month.day or day.month), that the dive started.
> Dive number (1 to 24) with # icon.
> Graphic NOR, TEC, GAU, or VIO, identifying the type of dive.
> NX icon, if it applies.
> LOG icon.

- A (hold) to scroll through previous dive's Preview screens at 8/sec, from the most recent toward the oldest recorded.
- A (< 2 sec) to step through the screens, recent to oldest.
- M (< 2 sec) to step through the screens in reverse order, oldest to recent.
- S (< 2 sec) to access that dive's Log Data 1 screen.
- S (2 sec) to revert to Log Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 18 - LOG PREVIEW

Log Data 1, information includes (Fig. 19):
> Time of day (hr:min) the dive started with clock and AM (or PM) icon.
> Graphic SEA (or L2 - L7), altitude level of dive.
> LOG icon.

- A (< 2 sec) to access that dive's Log Data 2 screen.
- S (2 sec) to revert to that dive's Log Preview.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 19 - LOG DATA 1

Log Data 2, information includes (Fig. 20):
> Pre dive Surface Interval (hr:min) with clock/wave icon, - : - - if # 1 (no previous dive that period).
> Temperature with °F (or °C) icon, minimum recorded during that dive.
> LOG icon.

- A (< 2 sec) to access that dive's Log Data 3 screen.
- M (< 2 sec) to step back that dive's Log Data 1 screen.
- S (2 sec) to revert to that dive's Log Preview.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 20 - LOG DATA 2

Log Data 3, information includes (Fig. 21):
> Z+ (or DSAT), CF, DS, NX icons, if they apply.
> Max Depth with FT (or M) and MAX icons.
> Elapsed Dive Time (hr:min) with wave/clock (EDT) icon.
> TLBG with max segment flashing, others fixed up to end of dive accumulation. Blank if GAUG or VGM.
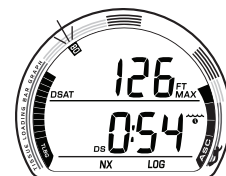> VARI, max Ascent Rate sustained for 4 sec.
> LOG icon.

- A (< 2 sec) to access that dive's Log Data 4 screen if Nitrox, or revert to Preview if not.
- M (< 2 sec) to step back that dive's Log Data 2 screen.
- S (2 sec) to revert to that dive's Log Preview.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 21 - LOG DATA 3

Log Data 4 (only if Nitrox), information includes (Fig. 22):
> O2% with icon, at end of dive.
> FO2 value set for Gas in use when dive ended, with FO2 and Gas (tank) icons.
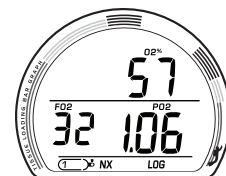> Max level of PO2 achieved with icon.
> NX and LOG icons.

- A (< 2 sec) to revert to Preview.
- M (< 2 sec) to step back that dive's Log Data 3 screen.
- S (2 sec) to revert to that dive's Log Preview.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 22 - LOG DATA 4

NORM/TECH SET GROUPS

Sequence >> Set Lead-in > Set OP MOD >> Set GAS >> Set ALM >> Set UTL >> Set TME.

Set OP MOD (Mode) - allows selection of the operating mode to be used.

Set GAS - allows FO2, and PO2 Alarms (TECH only), to be set.

Set ALM (Alarms) - allows dive alarms to be set or turned off.

Set UTL (Utilities) - allows general items to be set or turned off.

Set TME (Time/Date) - allows time, date, and formats to be set.

Set Group Lead-in, information includes (Fig. 23):
> Graphics Go To SET.

- S (< 2 sec) to access Set OP MOD Lead-in.
- A (< 2 sec) to step forward to History.
- M (< 2 sec) to step back to Log Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 23 - SET GROUP LEAD-IN

SET OP MOD LEAD-IN, information includes (Fig. 24):
> Graphics Go To OP MOD with SET icon.

- S (< 2 sec) to access Set OP, the mode currently active.
- A (< 2 sec) to step forward to Set GAS.
- S (2 sec) to step back to Set Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 24 - SET OP MODE LEAD-IN

Set OP, information includes (Fig. 25):
> Graphic OP with SET icon.
> Graphic NOR (or TEC, GAU, FRE) flashing.

- A (< 2 sec) to step forward through the selections.
- M (< 2 sec) to step back through the selections.
- S (< 2 sec) to save the selection and revert to that mode's Surface Main.
- S (2 sec) to step back to Set OP MOD Lead-in.
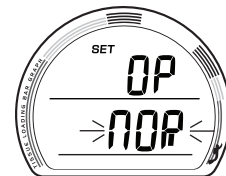- 2 minutes, or M (2 sec), revert to Main.

Fig. 25 - SET OP MODE

SETTING NORM/TECH FO2 AND PO2 ALARMS

NORM is for use with only 1 Gas for which FO2 can be set for Air, and 21 to 100% Nitrox. The PO2 Alarm is fixed at 1.40 with a Warning fixed at 1.20.

TECH is for use with up to 3 Gas' each of which FO2 can be set for Air, and 21 to 100% Nitrox. Each Gas has a separate PO2 Alarm which can be set from 1.00 to 1.60 with a Warning fixed at 0.20 less.

There is no FO2 50% Default setting like previous AERIS Nitrox dive computers.

Until a dive is conducted, FO2 for NORM and TECH remain at the values set for that mode (even if the mode is changed). When the unit shuts off, the settings revert to Air (the default for all gasses).

After a dive is conducted, FO2 Gas 1 remains at the value set for the mode in which the dive was conducted (NORM or TECH), and the setting automatically carries over to the other mode even if it had a different setting prior to the dive.

The PO2 alarm value for NORM remains fixed at 1.40 and the values for TECH remain as set, even if the mode is changed between dives.

FO2 set for Air:

The default FO2 for all Gas' each new period of activation is AIR.

When FO2 is set for AIR -

. . calculations are the same as when it is set for 21% O2.

. . it remains set for AIR until it is set for a numerical value (21 to 100%).

. . O2% and PO2 values and/or warnings will not be displayed at any time, on the surface or during dives.

. . max depths allowed by the PO2 limit set will not be displayed in Plan.

Internally, the unit will keep track of the oxygen loading so that if FO2 for Gas 1 is later set for a numerical value of FO2, the oxygen accumulated during previous Air dives will be accounted for in the next Nitrox dive (during that series of repetitive dives).

FO2 set for Nitrox:

When FO2 for any Gas is set for a numerical value (21 to 100%), the dive is considered Nitrox with the NX icon displayed on all applicable screens.

Once a dive is conducted with FO2 for Gas 1 is set for Nitrox, the Air option for any gas will be disabled until 24 hours elapse after the last dive. The Air option will not be displayed in Set FO2 until a full 24 hour Surface Interval has elapsed.

NORM/TECH SET GAS LEAD-IN, information includes (Fig. 26):
> Graphics Go To GAS with SET icon.

- S (< 2 sec) to access Set Gas 1.
- A (< 2 sec) to step forward to Set ALM Lead-in.
- M (< 2 sec) to step back to Set OP MOD Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

NORM/TECH SET GAS 1, information includes (Fig. 27, 28):
> SET, FO2, Gas (tank) 1 icons.
> CF, Z+ (or DSAT) icons, if they apply.
> Graphic AIR flashing, or -
. . Max Depth allowed with FT (or M) and MAX icons.
. . FO2 (numeric) value flashing. *Since there are only 2 digits, 100% is displayed as 00.*
. . PO2 Alarm value with PO2 icon. *NORM is fixed at 1.40 (cannot be set), TECH can be set.*

- A (hold) to scroll upward through FO2 settings from Air to 21 through 100% in 1% increments at 8/sec, stopping when the button is released, or at 32, then at 50, then at 80 (even if A is held depressed).
- A (hold) again to resume the scroll upward through 100%, then stop at Air (or 21 if a repetitive Nitrox dive).
- A (< 2 sec) to step upward through the Set Points one at a time.
- M (< 2 sec) to step back through the Set Points one at a time.
- S (2 sec), if the setting is not changed, to step back to Set Gas Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

- S (< 2 sec), if NORM, to save the setting and revert to Set Gas Lead-in.
- S (< 2 sec), if TECH, to save the setting and flash the PO2 digits if Nitrox, or access Set Gas 2 if Air.

To set PO2, if flashing -
- A (< 2 sec) to step upward through the Set Points of 1.00 to 1.60 one at a time in increments of 0.05.
- M (< 2 sec) to step back through the Set Points one at a time.
- S (< 2 sec) to save the PO2 Alarm setting and access Set Gas 2 (revert to Set Gas Lead-in after Gas 3).
- S (2 sec) to step back to Set Gas Lead-in.
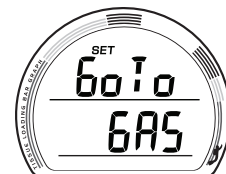
Fig. 26 - SET GAS LEAD-IN
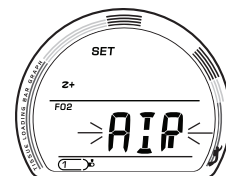
Fig. 27 - SET GAS 1
(for Air)
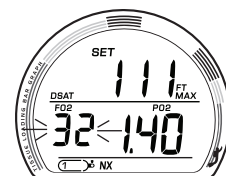
Fig. 28 - SET GAS 1
(for Nitrox)

TECH SET GAS 2 (3 similar), information includes (Fig. 29):
> SET, FO2, Gas (tank) 2 icons.
> CF, Z+ (or DSAT) icons, if they apply.
> Graphic AIR (or OFF*) flashing, or -
>   . . Max Depth allowed with FT (or M) and MAX icons.
>   . . FO2 (numeric) value flashing. *Since there are only 2 digits, 100% is displayed as 00.*
>   . . PO2 Alarm value with PO2 icon.

Fig. 29 - SET GAS 2
(Gas 3 similar)

OFF will prevent that Gas from being displayed as a switch option during dives.

- A (hold) to scroll upward through FO2 settings from OFF (if previously selected) to Air to 21 through 100% in 1% increments at 8/sec, stopping when the button is released, or at 32, then at 50, then at 80 (even if A is held depressed).
- A (hold) again to resume the scroll upward through 100%, then stop at Air (or 21 if a repetitive Nitrox dive).
- A (< 2 sec) to step upward through the Set Points one at a time.
- M (< 2 sec) to step back through the Set Points one at a time.
- S (2 sec), if the setting is not changed, to step back to Set Gas Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

- S (< 2 sec) to save the setting and flash the PO2 digits if Nitrox, or access Set Gas 3 if Air.

  To set PO2, if flashing -
  - A (< 2 sec) to step upward through the Set Points of 1.00 to 1.60 one at a time in increments of 0.05.
  - M (< 2 sec) to step back through the Set Points one at a time.
  - S (< 2 sec) to save the PO2 Alarm setting and access Set Gas 2 (revert to Set Gas Lead-in after Gas 3).
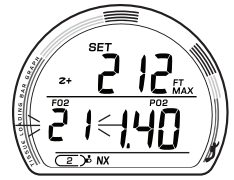 - S (2 sec) to step back to Set Gas Lead-in.
  - 2 minutes, or M (2 sec), revert to Main.

NORM/TECH SET ALM (ALARMS)
Unless noted otherwise, Alarm values set in one mode also apply to the other mode. Example: If the Audible is set OFF while in NORM mode, it can then be set ON while in TECH mode.

SET ALM LEAD-IN, information includes (Fig. 30):
> Graphics Go To and ALM with SET icon.

- S (< 2 sec) to access Set Audible.
- A (< 2 sec) to step forward to Set UTL Lead-in.
- M (< 2 sec) to step back to Set GAS Lead-in.
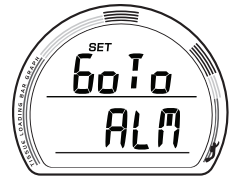- 2 minutes, or M (2 sec), revert to Main.

Fig. 30 - SET ALARMS
LEAD-IN

SET AUDIBLE ALARM, information includes (Fig. 31):
This feature is used to disable Audible Alarms and the associated LED, except during Violations. Setting it Off does not effect the messages or flashing that occurs when an Alarm strikes. It also does not affect FREE Mode Alarms (A300).

> Graphic AUD with SET icon.
> Graphic OFF (or ON) flashing.

- A or M (< 2 sec) to toggle between OFF and ON.
- S (< 2 sec) to save the setting and access Set Depth Alarm.
- S (2 sec), if the Set Point is not changed, to step back to Set ALM Lead-in.
- 2 minutes, or M (2 sec), revert to Main.
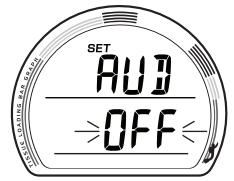
Fig. 31 - SET AUDIBLE

SET DEPTH ALARM, information includes (Fig. 32):
This feature is not the same as the Delayed Violation depth alarm, or the FREE depth alarms (A300), described later.

> SET icon.
> Graphic OFF (or ON) flashing, with Depth value last set with FT (or M) and MAX icons solid.

- A (< 2 sec) to step forward through the selections OFF, ON, and SET.
- M (< 2 sec) to step back through the selections.
- S (< 2 sec) to save the selection and access Set EDT Alarm if OFF or ON is saved, or flash the Depth digits if SET is saved.
- S (2 sec), if the selection is not changed, to step back to Set Audible.
- 2 minutes, or M (2 sec), revert to Main.
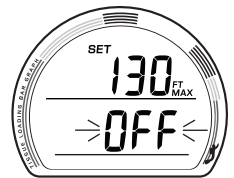
Fig. 32 - SET DEPTH ALARM

  If SET is saved and the Depth digits are flashing >>
  - A (hold) to scroll upward through the Set Points from 30 to 330 FT (10 to 100 M) in 10 FT (1 M) increments at 8/sec.
  - A (< 2 sec) to step upward through the Set Points one at a time.
  - M (< 2 sec) to step back through the Set Points one at a time.
  - S (< 2 sec) to save the Depth value (solid) and flash the graphic SET, allowing ON or OFF to be selected.
  - S (2 sec), if the Set Point is not changed, to step back to Set Audible.
  - 2 minutes, or M (2 sec), revert to Main.

SET EDT ALARM, information includes (Fig. 33):
> SET icon.
> Graphic OFF (or ON) flashing, with Time value (hr:min) last set with wave/clock icon solid.

- A (< 2 sec) to step through the selections OFF, ON, and SET.
- M (< 2 sec) to step back through the selections.
- S (< 2 sec) to save the selection and access Set TLBG Alarm if OFF or ON is saved (if TECH), or revert to Set ALM if OFF or ON is saved (if NORM), or flash the Time digits if SET is saved.
- S (2 sec), if the selection is not changed, to step back to Set Depth Alarm.
- 2 minutes, or M (2 sec), revert to Main.
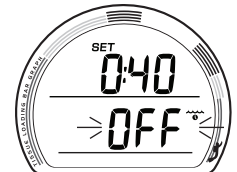
If SET is saved and the Time digits are flashing >>
- A (hold) to scroll upward through Set Points from 0:10 to 3:00 (hr:min) in :05 increments at 8/sec.
- A (< 2 sec) to step upward through the Set Points.
- M (< 2 sec) to step back through the Set Points.
- S (< 2 sec) to save the Time value (solid) and flash the graphic SET, allowing ON or OFF to be selected.
- S (2 sec), if the Set Point is not changed, to step back to Set Depth Alarm.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 33 - SET EDT ALARM

SET TLBG ALARM (TECH only), information includes (Fig. 34):
> SET icon and graphic TLBG.
> Graphic OFF (or ON) flashing, with TLBG segments last set solid.

- A (< 2 sec) to step through the selections OFF, ON, and SET.
- M (< 2 sec) to step back through the selections.
- S (< 2 sec) to save the selection and access Set DTR Alarm if OFF or ON is saved, or flash the Time digits if SET is saved.
- S (2 sec), if the selection is not changed, to step back to Set Depth Alarm.
- 2 minutes, or M (2 sec), revert to Main.

If SET is saved and the Time digits are flashing >>
- A (< 2 sec) to step upward through the Set Points from 14 through 19 segments.
- M (< 2 sec) to step back through the Set Points.
- S (< 2 sec) to save the TLBG value (solid) and flash the graphic SET, allowing ON or OFF to be selected.
- S (2 sec), if the Set Point is not changed, to step back to Set EDT Alarm.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 34 - SET TLBG ALARM

NORM mode has a fixed TLBG alarm that activates at 14 segments (70%).

SET DTR ALARM (TECH only), information includes (Fig. 35):
> SET icon.
> Graphic OFF (or ON) flashing, with Time value (hr:min) last set with wave/clock/profile icon solid.

- A (< 2 sec) to step through the selections OFF, ON, and SET.
- M (< 2 sec) to step back through the selections.
- S (< 2 sec) to save the selection and revert to Set ALM if OFF or ON is saved, or flash the Time digits if SET is saved.
- S (2 sec), if the selection is not changed, to step back to Set Depth Alarm.
- 2 minutes, or M (2 sec), revert to Main.
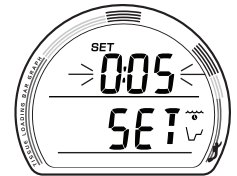
If SET is saved and the Time digits are flashing >>
- A (hold) to scroll upward through Set Points from 0:05 to 0:20 (hr:min) in :01 increments at 8/sec.
- A (< 2 sec) to step upward through the Set Points.
- M (< 2 sec) to step back through the Set Points.
- S (< 2 sec) to save the Time value (solid) and flash the graphic SET, allowing ON or OFF to be selected.
- S (2 sec), if the Set Point is not changed, to step back to Set TLBG Alarm.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 35 - SET DTR ALARM

NORM mode has a fixed DTR alarm that activates at 5 minutes.

NORM/TECH SET UTL (UTILITIES)
Unless noted otherwise, items set in one mode also apply to the other mode. Example: If the Units is set for Metric while in NORM mode, it can then be set for Imperial while in TECH mode.

SET UTL LEAD-IN, information includes (Fig. 36):
> Graphics Go To UTL with SET icon.

- S (< 2 sec) to access Set Water Type if TECH, or Set Units if NORM.
- A (< 2 sec) to step forward to Set TME Lead-in.
- M (< 2 sec) to step back to Set ALM Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 36 - SET DEPTH ALARM

SET WATER TYPE (TECH only), information includes (Fig. 37):
> Graphic H2O with SET icon.
> Graphic FRESH (or SEA) flashing.

- A or M (< 2 sec) to toggle between FRESH and SEA.
- S (< 2 sec) to save the setting and access Set Units.
- S (2 sec), if the Set Point is not changed, to step back to Set UTL Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 37 - SET WATER TYPE

SET UNITS, information includes (Fig. 38):
> Graphic UNIT with SET icon.
> Graphic IMP with FT icon (or MET with M icon) flashing.

- A or M (< 2 sec) to toggle between IMP (imperial) and MET (metric).
- S (< 2 sec) to save the setting and access Set Deep Stop (if TECH), or Set Safety Stop (if NORM).
- S (2 sec), if the Set Point is not changed, to step back to Set Wet Activation.
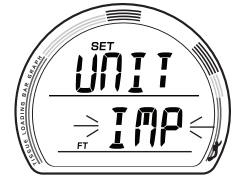- 2 minutes, or M (2 sec), revert to Main.

Fig. 38 - SET UNITS

SET DEEP STOP (TECH only), information includes (Fig. 39):
> Graphic DEEP with SET, Stop Bar/Arrows, and DS icons.
> Graphic OFF (or ON) flashing.

- A or M (< 2 sec) to toggle between OFF and ON.
- S (< 2 sec) to save the setting and access Set Safety Stop.
- S (2 sec), if the Set Point is not changed, to step back to Set Units.
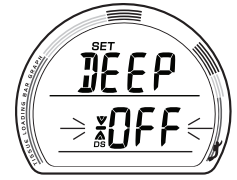- 2 minutes, or M (2 sec), revert to Main.

Fig. 39 - SET DEEP STOP

When Deep Stop is set On, a Stop screen will appear upon ascent to within 10 FT (3 M) below the calculated Stop Depth which is 1/2 the Max Depth achieved after first having descended to => 80 FT (24 M).

SET SAFETY STOP (NORM), information includes (Fig. 40, 41):
The Safety Stop (SS) can be turned OFF or ON, or set for TMR (Timer) which is a Run Timer that can be Started, Stopped, and Reset to time an independent SSp at a preferred depth (often required by charter operators).

If while in TECH mode, the SS is set for a Depth and Time other than 15 FT (4.5 M) for 3 minutes, the SS setting will revert to 15 FT (4.5 M) for 3 min if the OP Mode is changed to NORM and a dive is made in NORM.

> Graphic SAFE with SET, Stop Bar/Arrows, and SS icons.
> Graphic OFF, or ON, or ON TMR, flashing.

- A (< 2 sec) to step forward through the settings.
- M (< 2 sec) to step back through the settings.
- S (< 2 sec) to save the setting and access Set Algorithm.
- S (2 sec), if the Set Point is not changed, to step back to Set Units.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 40 - SET SAFETY STOP
(NORM/TECH)

SET SAFETY STOP (TECH), information includes (Fig. 40, 41, 42):
In TECH mode, the Safety Stop can be turned OFF or ON, set for TMR, or a Stop Depth and Time can be selected.

If the SS is set for a ON while in NORM mode, the SS will remain set ON and revert to the Depth/Time previously set while in TECH if the OP Mode is changed and a dive is made in TECH.

> Graphic SAFE with SET, Stop Bar/Arrows, and SS icons.
> Graphic OFF, or ON, or ON TMR, flashing.

- A (< 2 sec) to step forward through the settings of OFF, ON, ON TMR, and SET.
- M (< 2 sec) to step back through the settings.
- S (< 2 sec) to save the setting.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 41 - SET SAFETY STOP
(NORM/TECH, Timer)

  . . If OFF, ON, or TMR, is selected, operation will advance to Set Algorithm.
  . . If SET is selected, Stop Depth with FT (or M) icon and Stop Time with clock icon will be displayed, with the Time digits flashing (Fig. 42).

- A or M (< 2 sec) to toggle Stop Time between 3:00 and 5:00 (min:sec).
- S (< 2 sec) to save the Stop Time setting and flash the Depth digits.
- A (< 2 sec) to step through Depth Set Points of 10, 15, and 20 FT (or 3, 4, 5, and 6 M).
- M (< 2 sec) to step back through Depth Set Points.
- S (< 2 sec) to save Depth setting and revert to the Set SS screen with the graphic SET flashing.
- A or M (< 2 sec) to select ON or OFF (or TMR) and advance to Set Algorithm.
- S (2 sec), if the Set Point is not changed, to step back to Set Deep Stop.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 42 - SET SAFETY STOP
(TECH, Time/Depth)

SET ALGORITHM, information is to include (Fig. 43):
> Graphic ALGO with SET icon.
> Z+ (or DSAT) icon flashing.

- A or M (< 2 sec) to toggle between Z+ and DSAT.
- S (< 2 sec) to save the setting and access Set Sampling Rate if NORM, or Set Conservative Factor if TECH.
- S (2 sec), if the Set Point is not changed, to step back to Set Safety Stop.
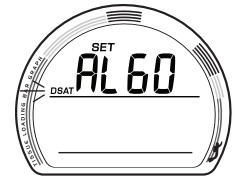- 2 minutes, or M (2 sec), revert to Main.

When Z+ is selected, Ni-O2 related calculations are based on the Pelagic Z+ algorithm. When DSAT is selected, the calculations are based on the standard Pelagic DSAT algorithm.

The selection locks in for 24 hours after surfacing from a NORM, TECH, or FREE (A300) dive.

Fig. 43 - SET ALGORITHM

SET CONSERVATIVE FACTOR (TECH only), information is to include (Fig. 44):
> Graphic CONS with SET and CF icons.
> Graphic OFF (or ON) flashing.

- A or M (< 2 sec) to toggle between OFF and ON.
- S (< 2 sec) to save the setting and access Set Backlight Duration.
- S (2 sec), if the Set Point is not changed, to step back to Set Algorithm.
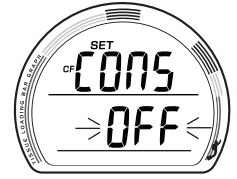- 2 minutes, or M (2 sec), revert to Main.

When the Conservative Factor is set ON, NDLs, which are to be based on the Algorithm selected (DSAT or Z+), are reduced to the values available at the next higher (+ 3000 feet) Altitude. Ex: NDLs for Sea Level shift to those listed for the 5001 to 6000 foot Altitude range.

Fig. 44 - SET CF
(Conservative Factor)

SET BACKLIGHT DURATION (TECH only), information is to include (Fig. 45):
Backlight Duration is the time that the Smartglo Backlight remains on after the S button used to activate it is released.

> Graphics GLO and SEC with SET icon.
> Duration Time (seconds) flashing, with clock icon.

- A (< 2 sec) to step through the Set Points of 5, 10, and 15 (sec).
- M (< 2 sec) to step back through the Set Points.
- S (< 2 sec) to save the setting and access Set Sampling Rate.
- S (2 sec), if the Set Point is not changed, to step back to Set Conservative Factor.
- 2 minutes, or M (2 sec), revert to Main.
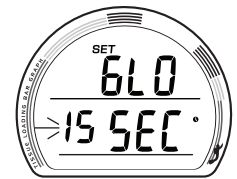
Fig. 45 - SET BACKLIGHT
DURATION

SET SAMPLING RATE, information is to include (Fig. 46):
Sampling Rate is the frequency (time interval) at which NORM, TECH, GAUG data is sampled and stored in memory for subsequent download to the PC Interface program.

> Graphics SAMP and SEC with SET icon.
> Time interval (seconds) flashing, with clock icon.

- A (< 2 sec) to step through the Set Points of 2, 15, 30, and 60 (sec).
- M (< 2 sec) to step back through the Set Points.
- S (< 2 sec) to save the setting and revert to SET U.
- S (2 sec), if the Set Point is not changed, to step back to Set Backlight Duration.
- 2 minutes, or M (2 sec), revert to Main.
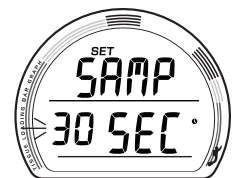
Fig. 46 - SET SAMPLING
RATE

SET TME (TIME/DATE)
Items set in this group apply to all modes, therefore they remain as set when moving between modes and they can be changed when in any mode.

SET TME LEAD-IN, information is to include (Fig. 47):
> Graphics Go To TME with SET icon.

- S (< 2 sec) to access Set Date Format.
- A (< 2 sec) to step forward to Set OP MOD Lead-in.
- M (< 2 sec) to step back to Set UTL Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 47 - SET TIME LEAD-IN

SET DATE FORMAT, information is to include (Fig. 48):
Date Format is used to establish the position on the screen of Month (M) relative to Day (D), which one is displayed on the left and which one on the right.

> Graphic DATE with SET icon.
> Graphic M.D (or D.M) flashing.

- A or M (< 2 sec) to toggle between the M.D and D.M.
- S (< 2 sec) to save the setting and access Set Hour Format.
- S (2 sec) to step back to Set TME Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 48 - SET DATE FORMAT

SET HOUR FORMAT, information is to include (Fig. 49):
Hour Format is used to establish how Time of Day is displayed, 1 to 12 hours (Am, Pm) or 1 to 24 hours.

> Graphic HOUR with SET icon.
> Graphic 12 (or 24) flashing.

- A or M (< 2 sec) to toggle between 12 and 24.
- S (< 2 sec) to save the setting and access Set Time.
- S (2 sec) to step back to Set Date Format.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 49 - SET HOUR FORMAT

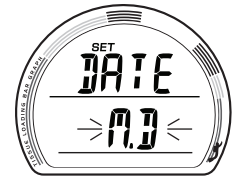**SET TIME,** information is to include (Fig. 50):
> SET icon.
> Time of Day (hr:min), Hour digits flashing, with AM (or PM) icon if 12 Hour Format.

- A (hold) to scroll upward through Hour Set Points from 12: AM to 11: PM (or 0: to 23: if 24 Hour Format) in one Hour (1:) increments at 8/sec.
- A (< 2 sec) to step upward through Hour Set Points.
- M (< 2 sec) to step back through Hour Set Points.
- S (< 2 sec) to save the Hour setting and flash the Minute digits.
- S (2 sec) to step back to Set Hour Format.
- A (hold) to scroll upward through Minute Set Points from :00 to :59 in one Minute (:01) increments at 8/sec.
- A (< 2 sec) to step upward through Minute Set Points.
- M (< 2 sec) to step back through Minute Set Points.
- S (< 2 sec) to save the Time setting and access Set Date.
- S (2 sec) to step back to Set Hour.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 50 - SET TIME

SET DATE, information is to include (Fig. 51):
> SET icon
> Month.Day (or Day.Month).
> Year digits flashing.

- A (hold) to scroll upward through Year Set Points from 2011 to 2054 in one Year increments at 8/sec (with leap Year corrections).
- A (< 2 sec) to step upward through Year Set Points.
- M (< 2 sec) to step back through Year Set Points.
- S (< 2 sec) to save the Year setting and flash the Month digits, regardless of their position relative to Day.
- S (2 sec) to step back to Set Time.
- A (hold) to scroll upward through Month Set Points from 1 to 12 in one Month (1) increments at 8/sec.
- A (< 2 sec) to step upward through Month Set Points.
- M (< 2 sec) to step back through Month Set Points.
  Single digits are right justified (6.) if M.D and left justified (.6) if D.M.
- S (< 2 sec) to save the Month setting and flash the Day digits.
- S (2 sec) to step back to Set Year.
- A (hold) to scroll upward through Day Set Points from 1 to 31 in one Day (1) increments at 8/sec.
- A (< 2 sec) to step upward through Day Set Points.
- M (< 2 sec) to step back through DaySet Points.
  Single digits are left justified (.2) if M.D and right justified (2.) if D.M.
- S (< 2 sec) to save the Date setting and revert to SET TME Lead-in.
- S (2 sec) to step back to Set Month.
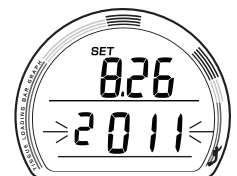- 2 minutes, or M (2 sec), revert to Main.

Fig. 51 - SET DATE

HISTORY MODE
History is a summary of data recorded during all NORM, TECH, and GAUG dives conducted.

If no dives have been recorded, the graphics NONE YET will be displayed upon accessing screen 1, other screens will not be available.

History 1, information includes (Fig. 52):
> Total dive hours recorded (up to 9999) with clock icon.
> Total dives recorded (up to 9999) with # icon.
> HIST icon.

- S (< 2 sec) to access History 2.
- A (< 2 sec) to step forward to ID-SN.
- M (< 2 sec) to step back to SET Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 52 - HISTORY 1

History 2, information includes (Fig. 53):
> Max Depth recorded with FT (or M) and MAX icons.
> Longest dive time (hr:min) recorded during a single dive (up to 9:59 min) with wave/clock (EDT) icon.
> HIST icon.

- A (< 2 sec) to access History 3.
- S (2 sec) to revert to History 1.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 53 - HISTORY 2

History 3, information includes (Fig. 54):
> Lowest Temperature recorded during a dive with °F (or °C) icon.
> Graphic SEA (or L2 to L7), highest Altitude at which a dive was conducted.
> HIST icon.

- A (< 2 sec) to revert to History 1.
- S (2 sec) to revert to History 1.
- M (< 2 sec) to step back to History 2.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 54 - HISTORY 3

ID - SN (Identification), information includes (Fig. 55):
This information should be recorded and kept, it will be required in the event that your unit requires factory service.

> Graphic R1A (or higher)*, indicating the Firmware revision level currently installed in the unit.
> Factory programmed serial number (up to 5 digits) with # icon.

  *This number will change if the Firmware is updated by factory service or by future download of a newer revison from the AERIS web site.

- A (< 2 sec) to revert to Surface Main.
- M (< 2 sec) to step back to History 1.
- S (< 2 sec) to access Clear, only after dives when residual nitrogen remains.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 55 - IDENTIFICATION

NORM/TECH CLEAR, information includes (Fig. 56):
The unit is configured with a feature that allows nitrogen and oxygen calculations to be cleared. **This is intended for facilities using the unit for rental or training activities, not for general use by individual divers.**

⚠ **WARNING: Reset after a dive and subsequent use for a repetitive dive conducted by the same diver could result in serious injury or death.**

Reset procedure:
- S (< 2 sec), while the ID-SN screen is displayed, to access the Clear screen displaying the graphic CLR and the reset code numbers xx yy, all solid.
- S (< 2 sec) again will flash the first 2 digits (xx).
- A (hold) to scroll upward through the first digits (xx) from 01 to 49 at 8/sec.
- A (< 2 sec) to step upward through the digits (xx).
- M (< 2 sec) to step back through the digits (xx).
- S (< 2 sec) to save the first 2 digits (xx) and flash the second 2 digits (yy).
- A (hold) to scroll upward through the second digits (yy) from 01 to 49 at 8/sec.
- A (< 2 sec) to step upward through the digits (yy).
- M (< 2 sec) to step back through the digits (yy).
- S (< 2 sec) to save the reset code, clear the unit (if 20 02), and turn it Off. All nitrogen/oxygen calculations and data will be deleted.
- S (2 sec) will revert to the ID-SN screen, if the reset code is not entered correctly, or you want to exit the routine without clearing the unit.
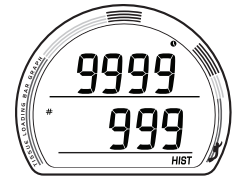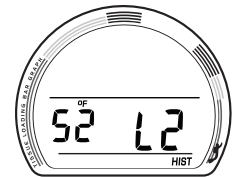
Fig. 56 -CLEAR

DIVE MODE

FEATURES

WET ACTIVATION OF DIVE MODE

The unit is configured with contacts that will automatically activate Dive Mode when the space between the contacts is bridged by a conductive material (immersed in water) and it senses a Depth of 5 FT (1.5 M).

The contacts are the metal pins of the PC Interface Data Port and the stems of the buttons.

SMARTGLO® BACKLIGHT

The unit is configured with a sensor that measures the intensity of ambient light. This (Smartglo) saves battery power by allowing the Backlight to only come on when light level is low.

To activate the SmartGlo Backlight >> press the S button.
- If ambient light level is low, the Backlight will activate and illuminate the display for button depression time plus 10 seconds if in NORM mode, or the Duration time set (5, 10, or 15 seconds) if in TECH, GAUG, or FREE mode.
- Pressing any button while the Backlight is on will reset the timer, keeping it on for the duration time.

Extensive use of the Backlight reduces estimated Battery life. Also, the Backlight does not operate during a Low Battery condition or when the unit is connected to a PC.

BAR GRAPHS

The unit features 2 bar graphs, one on each side of the LCD.

> The TLBG (Tissue Loading Bar Graph) on the left (Fig. 57a) represents nitrogen loading.
> The VARI (Variable Ascent Rate Indicator) on the left (Fig. 57b) represents ascent rate.

Fig. 57 - BAR GRAPHS

TLBG

The TLBG represents relative No Deco or Deco status.

The first 19 segments (13 normal, plus 6 caution*) represent No Deco status and all 20 indicate a Deco condition.

The 6 caution segments represent nitrogen loading equal to 70, 75, 80, 85, 90, and 95 % allowable tissue loading for the current Depth and EDT.

As Depth and Elapsed Dive Time increase, segments add to the TLBG beginning at the bottom.

During ascents and as post dive Surface Intervals elapse, as nitrogen is off gassed, segments recede indicating that additional No Deco time is available.

The unit monitors 12 different nitrogen compartments simultaneously and the TLBG displays the one that is in control of the dive at any given time.

VARI

The VARI provides a visual representation of ascent speed (i.e., an ascent speedometer).

The segments represent two sets of speeds which change at a reference depth of 60 FT (18 M). Refer to the chart.

When ascent is too fast, all segments of the VARI flash (Fig. 58) until ascent is slowed.

⚠ **WARNING: At depths greater than 60 FT (18 M), ascent rates should not exceed 60 FPM (18 MPM). At depths of 60 FT (18 M) and shallower, ascent rates should not exceed 30 FPM (9 MPM).**

60 FT (18 M) & Shallower

VARI Segments	Ascent Rate FPM	MPM
0	0 - 10	0 - 3
1	11 - 15	3.1 - 4.5
2	16 - 20	4.6 - 6
3	21 - 25	6.1 - 7.5
4	26 - 30	7.6 - 9
5	30 +	9 +

Deeper than 60 FT (18 M)

VARI Segments	Ascent Rate FPM	MPM
0	0 - 20	0 - 6
1	21 - 30	6.1 - 9
2	31 - 40	9.1 - 12
3	41 - 50	12.1 - 15
4	51 - 60	15.1 - 18
5	60 +	18 +

DUAL ALGORITHM®

The unit is configured with 2 algorithms which allows you to choose which set of NDLs (No Deco Limits) will be used for Ni/O2 calculations and displays relating to Plan and DTR (Dive Time Remaining). The selection will lock in for 24 hours after the dive.

You can select DSAT or Z+.

Fig. 58 - ASCENT TOO FAST

DSAT has been the standard used by AERIS in all of its dive computers until this time. It features NDLs that are based on exposures and test data which also formed validation for the PADI RDP. It imposes restrictions for repetitive Deco dives, considered more risky.

Z+ (Pelagic Z+) performance is based on Buhlmann ZHL-16c. It features NDLs that are considerably more conservative especially at shallower depths.

To create even greater margins of safety with respect to decompression, a Conservative Factor as well as No Deco Deep and Safety Stops can be included for No Deco dives.
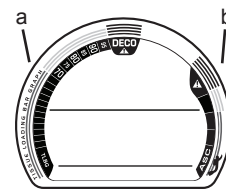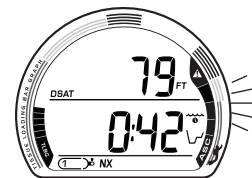
CONSERVATIVE FACTOR (CF)
When the CF is set On, the NDLs which are based on the algorithm selected and used for Ni/O2 calculations and displays relating to Plan and DTR, will be reduced to the values available at the altitude level that is 3,000 feet (915 meters) higher. Refer to the NDL charts in the back of this manual.

TECH DEEP STOP (DS)
When the DS selection is set On, it will trigger during TECH No Deco dives when you descend to 80 FT (24 M) and calculate (and continually update) a Stop Depth equal to 1/2 the Max Depth.

While 10 FT (3 M) deeper than the calculated DS, you will be able to access a DS Preview screen that will display the current Deep Stop Depth (calculated) and Time (fixed at 2 min) for 5 seconds then return to the Main.

Upon initial ascent to within 10 FT (3 M) below the calculated Stop Depth, a DS screen displaying a Stop Depth at 1/2 the Max Depth will appear with a Countdown Timer beginning at 2:00 (min:sec) and counting down to 0:00.

> If you descend 10 FT (3 M) below, or ascend 10 FT (3 M) above, the calculated Stop Depth for 10 seconds during the countdown, the No Deco Main will replace the DS Main display and the DS feature will be disabled for the remainder of that dive. There is no Penalty if the DS is ignored.
> In the event that you enter Deco, exceed 190 FT (57 M), or a High O2 condition (=> 80%) occurs, the DS will be disabled for the remainder of that dive.
> The DS is disabled during a High PO2 Alarm condition (=> Set Point).

NORM/TECH SAFETY STOP (SS)
Both modes features Safety Stops that can be set Off, or On, or for Timer On.

   NORM On >> The Stop Depth/Time setting is fixed at 15 FT (4.5 M) for 3 minutes.

   TECH On >> The Stop Depth/Time is set (a Set U selection).

If set On:
Upon ascent to within 5 FT (1.5 M) deeper than the SS Depth set for 1 second on a No Deco dive in which Depth exceeded 30 FT (9 M) for 1 second, a beep will sound and a SS at the Depth set will appear on the Main display with a countdown beginning at the SS Time set and counting down to 0:00 (min:sec).

> If the SS was set for Off or Timer, this display will not appear.
> In the event that you descend 10 FT (3 M) deeper than the Stop Depth for 10 seconds during the countdown, or the countdown reaches 0:00, the No Deco Main screen will replace the SS Main screen which will reappear upon ascent to within 5 FT (1.5 M) deeper than the Safety Stop Depth set for 1 second.
> In the event that you enter Deco during the dive, complete the Deco obligation, then descend below 30 FT (9 M); the SS Main will appear again upon ascent to within 5 FT (1.5 M) deeper than the SS Depth set for 1 second.
> If you surface prior to completing the SS, it will be disabed for the remainder of that dive.
> There is no Penalty if you surface prior to completing the SS or ignore it.

If set for Timer On:
Upon ascending to 20 FT (6 M) for 1 second on a No Deco dive in which Depth exceeded 30 FT (9 M) for 1 second, a beep will sound and a Run Timer will appear (if set On) displaying 0:00 (min:sec) until started.

• If the SS was set for Off or On, the Timer display will not appear.
• If you descend deeper than 30 FT (9 M) for 10 seconds, the No Deco Main will replace the Timer screen which will reappear upon ascent to 20 FT (6 M) for 1 second.
• If you enter Deco, or a High O2 alarm condition occurs (100%), while the SS Timer is active, the SS function will be disabled for the remainder of that dive.
• If you surface prior to completing the SS, it will be disabled for the remainder of that dive.

DIVE TIME REMAINING (DTR)
Nitrogen loading and oxygen accumulation are constantly monitored, and whichever time is the least amount available (NDC or OTR) will be displayed as DTR on the No Deco Dive Main screen.

No Deco DTR (NDC)
NDC is the maximum amount of time that you can stay at your present depth before entering Deco. It is calculated based on the amount of Nitrogen absorbed by hypothetical tissue compartments.

The rates each of these compartments absorb and release Nitrogen is mathematically modeled and compared against a maximum allowable level.

Whichever compartment value is closest to this maximum level is in control for that Depth, and the value will be displayed as NDC time identified by the wave/clock/profile icon (Fig. 59a) and graphically as the TLBG (Fig. 59b).

As you ascend, the TLBG segments will recede as control shifts to slower compartments. This is a feature of the decompression model that is the basis for multilevel diving, one of the most important advantages that AERIS dive computers offer.
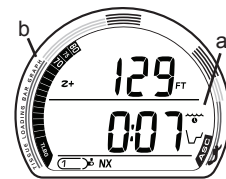
Fig. 59 - NO DECO MAIN
(NDC is DTR)

O2 Time Remaining (OTR)

During Nitrox operation, O2 accumulation during a dive, or 24 hour period, is displayed on an Alternate screen as a percent of O2 saturation allowed per dive or per day (Fig. 60a). Max allowed is 300 OTU (= 100%).

When time remaining before reaching the O2 limit becomes less than NDC, calculations for that Depth will be controlled by O2 and OTR will be displayed as DTR on the Dive Main (Fig. 61a).

Fig. 60 - NO DECO ALT 3
(current % O2)

Fig. 61 - NO DECO MAIN
(OTR is DTR)

DIVE MODE STRUCTURE

NORM DIVE MODE

TECH DIVE MODE

NORM/TECH

DIVE MODES

**Unless noted otherwise, information in this section
applies to both NORM and TECH dives.**

25

NO DECO MAIN, information includes (Fig. 62) -
> Z+ (or DSAT) icon, algorithm selected.
> CF icon, if set On (TECH only).
> Current Depth with FT (or M) icon.
> DTR (hr:min) with wave/clock/profile (NDC) icon.
> DS icon, if set On and triggered (TECH only).
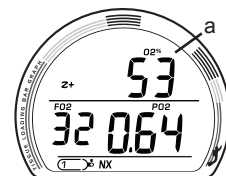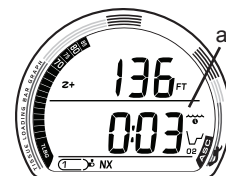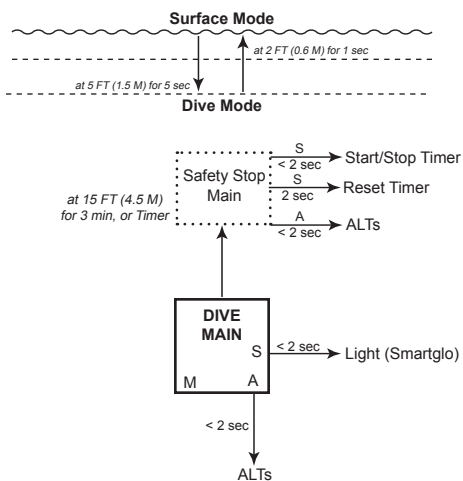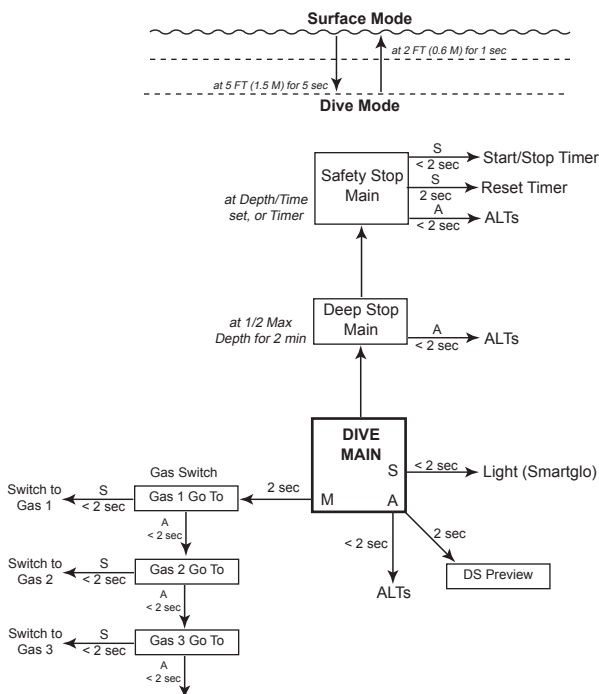> Gas (tank) 1 icon; one in use (1, 2, or 3 if TECH).
> NX icon, if FO2 is set for nitrox, blank if Air.
> TLBG, VARI, if they apply.

* A (< 2 sec) to access ALT 1.
* M (2 sec) to access Gas Switching (TECH only).
* S (< 2 sec) to silence/acknowledge alarms.
* S (press) to activate Smartglo® Backlight.

Fig. 62 - NO DECO MAIN

NO DECO ALT 1, information includes (Fig. 63) -
> Max Depth with FT (or M) and MAX icons.
> EDT (hr:min) with wave/clock icon.

* A (< 2 sec) to access ALT 2.
* M (< 2 sec) to step back to Main.
* 10 sec, revert to Main if A or M is not pressed.
* S (press) to activate Smartglo® Backlight.

Fig. 63 - NO DECO ALT 1

NO DECO ALT 2, information includes (Fig. 64) -
> Time of Day (hr:min) with AM (or PM) icon if 12 Hour.
> Temperature with °F (or °C) icon.

* A (< 2 sec) to access ALT 3 if Nitrox, or revert to Main if Air.
* M (< 2 sec) to step back to ALT 1.
* 10 sec, revert to Main if A or M is not pressed.
* S (press) to activate Smartglo® Backlight.

Fig. 64 - NO DECO ALT 2

NO DECO ALT 3, information includes (Fig. 65) -
> Z+ (or DSAT) icon, algorithm selected.
> O2% accumulated with icon.
> FO2 with icon, value set for Gas in use.
> PO2 value (x.xx ATA) with icon.
> Gas (tank) 1 icon; one in use (1, 2, or 3 if TECH).
> NX icon.

* A (< 2 sec) to revert to Main (if NORM), or access DS Preview if set On and triggered (if TECH).
* M (< 2 sec) to step back to ALT 2.
* 10 sec, revert to Main if A or M is not pressed.
* S (press) to activate Smartglo® Backlight.

Fig. 65 - NO DECO ALT 3

TECH DEEP STOP PREVIEW, information includes (Fig. 66) -
> Graphic PREV.
> Stop Depth with FT (or M) icon, calculated to be 1/2 Max Depth.
> DS icon with dash (-).
> Stop Time as 2:00 (min:sec) with clock icon.

* A (< 2 sec) to revert to Main.
* M (< 2 sec) to step back to ALT 3 if Nitrox or to ALT 2 if Air.
* 10 sec, revert to Main if A or M is not pressed.
* S (press) to activate Smartglo® Backlight.

Fig. 66 - DS PREVIEW

TECH DEEP STOP MAIN, information includes (Fig. 67) -
> Z+ (or DSAT) icon, algorithm selected.
> CF icon, if set On.
> Current Depth with FT (or M) icon.
> Stop Depth with FT (or M) icon, calculated to be 1/2 Max Depth.
> Stop icon (arrows, bar) with DS icon.
> Stop Time (min:sec) with clock icon.
> Gas (tank) icon; one in use (1, 2, or 3).
> NX icon, if FO2 is set for Nitrox, blank if Air.
> TLBG, VARI, if they apply.

* A (< 2 sec) to access ALT 1.
* M (2 sec) to access Gas Switching.
* S (< 2 sec) to silence/acknowledge alarms.
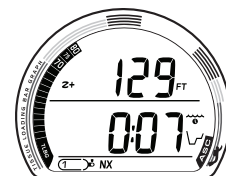* S (press) to activate Smartglo® Backlight.
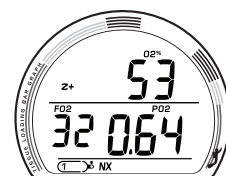
Fig. 67 - DS MAIN

DS ALTs, information -
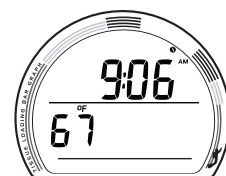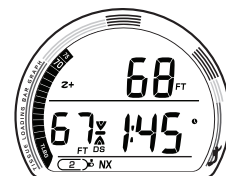> #1 >> is similar to No Deco Main.
> #2 >> is similar to No Deco ALT 1.
> #3 >> is similar to No Deco ALT 2.
> #4 >> is similar to No Deco ALT 3.

SAFETY STOP MAIN, information includes (Fig. 68, 69) -
> Z+ (or DSAT) icon, algorithm selected.
> CF icon, if set On (TECH only).
> Current Depth with FT (or M) icon.
> Stop Depth with FT (or M) icon; fixed at 15 FT (4.5 M) if NORM, at value set if TECH.
> Stop icon (arrows, bar) with SS icon.
> Stop Time (min:sec) with clock icon; start at 3 minutes if NORM, at value set if TECH.
> Gas (tank) 1 icon; one in use (1, 2, or 3) if TECH.
> NX icon, if FO2 is set for Nitrox, blank if Air.
> TLBG, VARI, if they apply.

- A (< 2 sec) to access ALT 1.
- M (2 sec) to access Gas Switching (if TECH).
- S (< 2 sec) to silence/acknowledge alarms.
- S (press) to activate Smartglo® Backlight.

- or -

> Z+ (or DSAT) icon, algorithm selected.
> CF icon, if set On.
> Current Depth with FT (or M) icon.
> Graphic RT (Run Time).
> Stop icon (arrows, bar) with SS icon.
> Run Time (min:sec) with clock icon; counting up to 9:59 (min:sec), then to 5:59 (hr:min).
> Gas (tank) 1 icon; one in use (1, 2, or 3) if TECH.
> NX icon, if FO2 is set for Nitrox, blank if Air.
> TLBG, VARI, if they apply.

- A (< 2 sec) to access ALT 1.
- M (2 sec) to access Gas Switching (if TECH).
- S (< 2 sec) to silence/acknowledge alarms.
- S (press) to activate Smartglo® Backlight.

SS ALTs, information -
> #1 >> is similar to No Deco Main.
> #2 >> is similar to No Deco ALT 1.
> #3 >> is similar to No Deco ALT 2.
> #4 >> is similar to No Deco ALT 3.

Fig. 68 - SS MAIN
(at set Depth/Time)

Fig. 69 - SS MAIN
(set for Run Timer)

DECOMPRESSION

Decompression mode activates when theoretical No Decompression time and depth limits are exceeded.

Upon entry into Deco, the Audible will sound during which the alarm LED and full TLBG will flash. An Up Arrow icon will also flash (Fig. 70), until within 10 FT (3 M) of and below the required Stop Depth (the Stop Zone).

- S (< 2 sec) to silence the Audible.

> Once within 10 FT (3 M) of and below the required Stop Depth (in the Stop Zone), the full Stop icon (Up and Down Arrows with Stop Bar) will be displayed solid.

Fig. 70 - DECO ENTRY
(during Audible)

Managing Deco Stops

To fulfill your decompression obligation, you should make a safe controlled Ascent to a depth slightly deeper than, or equal to, the required Stop Depth indicated and decompress for the Stop Time indicated.

The amount of decompression credit time that you receive is dependent on Depth, with slightly less credit given the deeper you are below the Stop Depth indicated.

You should stay slightly deeper than the required Stop Depth indicated until the next shallower Stop Depth appears. Then, you can slowly ascend to, but not shallower than that indicated Stop Depth.
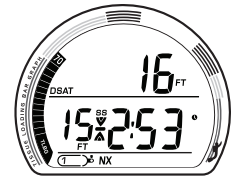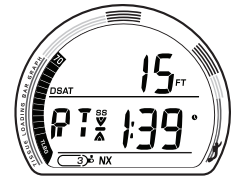
DECO STOP MAIN, information includes (Fig. 71) -
> Z+ (or DSAT) icon, algorithm selected.
> CF icon, if set On.
> Current Depth with FT (or M) icon.
> Stop Depth with FT (or M) icon.
> Stop icon (arrows, bar).
> Stop Time (hr:min) with wave/clock/profile/bar (Deco) icon.
> Gas (tank) 1 icon; one in use (1, 2, or 3) if TECH.
> NX icon, if FO2 is set for Nitrox, blank if Air.
> Full TLBG (all segments).

- A (< 2 sec) to access ALT 1.
- M (2 sec) to access Gas Switching (TECH only).
- S (< 2 sec) to silence/acknowledge alarms.
- S (press) to activate Smartglo® Backlight.

Fig. 71 - DECO STOP MAIN

DECO STOP ALT 1, information includes (Fig. 72) -
> Max Depth with FT (or M) and MAX icons.
> Total Ascent Time (hr:min) with TAT and clock icons.

- A (< 2 sec) to access ALT 2.
- M (< 2 sec) to step back to Main.
- 10 sec, revert to Main if A or M is not pressed.
- S (press) to activate Smartglo® Backlight.

Fig. 72 - DECO STOP ALT 1

DECO STOP ALT 2, information includes (Fig. 73) -
> Max Depth with FT (or M) and MAX icons.
> EDT (hr:min) with wave/clock icon.

- A (< 2 sec) to access ALT 3.
- M (< 2 sec) to step back to ALT 1.
- 10 sec, revert to Main if A or M is not pressed.
- S (press) to activate Smartglo® Backlight.

Fig. 73 - DECO STOP ALT 2

DECO STOP ALT 3, information includes (Fig. 74) -
> Time of Day (hr:min) with AM (or PM) icon if 12 Hour.
> Temperature with °F (or °C) icon.

- A (< 2 sec) to access ALT 4 if Nitrox, or revert to Main if Air.
- M (< 2 sec) to step back to ALT 2.
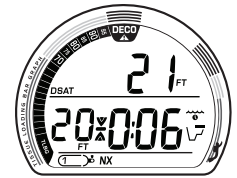- 10 sec, revert to Main if A or M is not pressed.
- S (press) to activate Smartglo® Backlight.

Fig. 74 - DECO STOP ALT 3

DECO STOP ALT 4, information includes (Fig. 75) -
> Z+ (or DSAT) icon, algorithm selected.
> O2% accumulated with icon.
> FO2 with icon, value set for Gas in use.
> PO2 value (x.xx ATA) with icon.
> Gas (tank) 1 icon; one in use (1, 2, or 3 if TECH).
> NX icon.
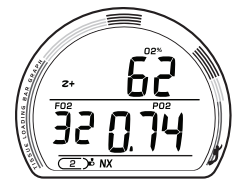
- A (< 2 sec) to revert to Main.
- M (< 2 sec) to step back to ALT 3.
- 10 sec, revert to Main if A or M is not pressed.
- S (press) to activate Smartglo® Backlight.

Fig. 75 - DECO STOP ALT 4

NORM/TECH CONDITIONAL VIOLATION (CV)
Upon ascent above the required Deco Stop Depth, operation will enter CV during which no off gassing credit will be given, meaning Deco Stop Time and TAT will not decrease.

The Audible will sound during which the alarm LED will flash. A Down Arrow will also flash (Fig. 76) until descent is made to below the required Stop Depth, then it is removed.

- S (< 2 sec) to silence Audible.
> Other button operations and displays are similar to Deco.
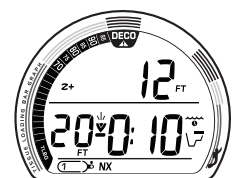
Fig. 76 - CV MAIN

If descent below the required Deco Stop Depth is made within 5 minutes, operation will resume in Deco with off gassing credit given (Stop Time and TAT will decrease).

DELAYED VIOLATION 1 (DV1)

Once above the Deco Stop Depth for more than 5 minutes, operation will enter DV1 which is a continuation of CV**.

**The difference between DV1 and CV is that DV1 causes operation to enter Violation Gauge Mode 5 minutes after surfacing from that dive.

The Audible will sound during which the alarm LED and full TLBG will flash. The Down Arrow icon will flash (Fig. 77) until descent is made to below the required Stop Depth.

> Button operations and displays are similar to Deco.

When descent below the required Deco Stop Depth is made, operation will resume in Deco with off gassing credit given (Stop Time and TAT decrease).
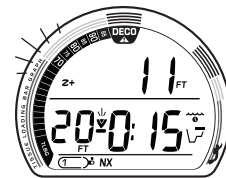
Fig. 77 - DV1 MAIN

DELAYED VIOLATION 2 (DV2)

If the calculated Deco obligation requires a Stop Depth between 60 FT (18 M) and 70 FT (21 M), operation will enter DV2.

Upon entry into DV2**, the Audible will sound during which the alarm LED and full TLBG will flash. The Up Arrow icon will also flash until within 10 FT (3 M) of and below the required Stop Depth of 60 FT (18 M).

**The difference between DV2 and general Deco is that DV2 causes operation to enter Violation Gauge Mode 5 minutes after surfacing from that dive.

> Once within 10 FT (3 M) of and below the required Stop Depth, the full Stop icon (Up and Down Arrows with Stop Bar) will be displayed solid (Fig. 78).
> Button operations and displays are similar to Deco.
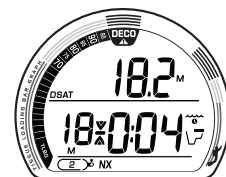
Fig. 78 - DV2 MAIN

DELAYED VIOLATION 3 (DV3)

Upon descent deeper than the MOD**, the Audible will sound during which the alarm LED will flash. The Up Arrow icon and the loaded segments of the TLBG will also flash, and Current Depth and Max Depth will only indicate 3 dashes (- - -).

**MOD is the Max Operating Depth at which the A300 AI can accurately perform calculations and display data.

MOD = 330 FT (100 M) in NORM, TECH, FREE mode.
MOD = 399 FT (120 M) in GAUG mode.

Upon ascending above the MOD, Current Depth will be restored, however, Max Depth will display 3 dashes for the remainder of that dive. Also, the Log for that dive will display 3 dashes as the Max Depth.

DV3 MAIN, information includes (Fig. 79) -
> Z+ (or DSAT) icon, algorithm selected.
> CF icon, if set On (TECH only).
> Current Depth as 3 dashes (- - -) with FT (or M) icon.
> Up Arrow icon, flashing until above MOD.
> DTR as 3 dashes (- : - -) with wave/clock/profile (NDC) icon.
> Gas (tank) 1 icon; one in use (1, 2, or 3 if TECH).
> NX icon, if FO2 is set for Nitrox, blank if Air.
> TLBG flashing, VARI while ascending.

• A (< 2 sec) to access ALT 1.
• M (2 sec) to access Gas Switching (TECH only).
• S (< 2 sec) to silence/acknowledge alarms.
• S (press) to activate Smartglo® Backlight.

> ALTs are similar to No Deco or Deco, whichever applies.
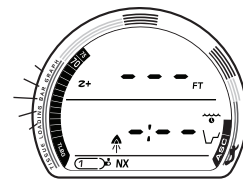
Fig. 79 - DV3 MAIN

VIOLATION GAUGE MODE (VGM)

If a Deco Stop Depth greater than 70 FT (21 M) is required, operation will enter VGM. This would be preceded by DV2.

Operation would then continue in VGM during the remainder of that dive and for 24 hours after surfacing.

VGM turns the unit into a digital instrument without any decompression or oxygen related calculations or displays.

Upon activation of VGM, the Audible will sound during which the alarm LED and full TLBG* will flash. The graphics UP VIO and Up Arrow icon will also be displayed flashing in place of Deco Stop data (Fig. 80), until on the surface.

*After the audible is silenced, the TLBG will be removed.

Fig. 80 - VGM MAIN
(during Audible)

VGM Main, information includes (Fig. 81) -
> Current Depth with FT (or M) icon.
> Graphics UP VIO with Up Arrow icon, flashing until on surface.
> VARI, while ascending.

- A (< 2 sec) to access ALT 1.
- M (2 sec) to access Gas Switching (TECH only).
- S (< 2 sec) to silence/acknowledge alarms.
- S (press) to activate Smartglo® Backlight.

> ALTs are similar to Deco, with no TAT or O2 data.

Fig. 81 - VGM MAIN
(after Audible)

VGM on Surface

The graphic VIO flashes for the first 10 minutes (Fig. 82), then VIO alternates with NOR or TEC, each On 3 seconds, until unit shut down after 24 hours with no dives*.

A full 24 hour surface interval must then be served before all functions are restored.

During that 24 hours, access to all selections and screens is available except those associated with Ni-O2 calculations such as Desat, Plan, Set FO2. The Fly countdown timer provides the time remaining (of the 24 hours required) before normal operation can resume with full features and functions.

Fig. 82 - VGM MAIN
(on surface)

HIGH PO2

Warning, in NORM >> at 1.20 only.
Alarm, in NORM >> at 1.40 only, except in Deco then at 1.60 only.

Warning, in TECH >> at 0.80 to 1.40 (0.20 less than Alarm value set).
Alarm, in TECH >> at Set Point value, except in Deco then at 1.60 only.

When partial pressure of oxygen (PO2) increases to the Warning level, the Audible will sound during which the graphic UP, Up Arrow icon, and PO2 value with icon will flash in place of DTR (Fig. 83).

> After the Audible is silenced, DTR is restored, and the graphic UP and Up Arrow icon remain on solid until PO2 decreases below the warning level when they are removed.
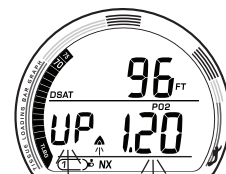
Fig. 83 - PO2 WARNING
(during Audible)

If PO2 continues to increase and reaches the PO2 Alarm level, the Audible will sound again during which the graphic UP, Up Arrow icon, and PO2 value with icon will flash in place of DTR.

> After the Audible is silenced, DTR will alternate with the PO2 value, and the graphic UP and Up Arrow icon remain on solid (Fig. 84) until PO2 decreases below the warning level when they are removed.

- A (< 2 sec) to access ALTs.
- M (2 sec) to access Gas Switching (TECH only).
- S (< 2 sec) to silence/acknowledge alarms.
- S (press) to activate Smartglo® Backlight.

> ALTs are similar to No Deco.

alternate with PO2
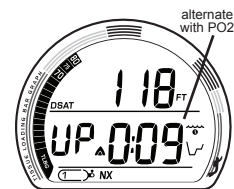
Fig. 84 - PO2 ALARM
(after Audible)

PO2 during Deco

The PO2 warnings, and the alarm values that were set, do not apply when in Deco.

When PO2 reaches 1.60, the Audible will sound during which the PO2 value with icon will flash in place of Stop Time.

> After the Audible is silenced, the PO2 value with icon will alternate with Stop Time once each minute* (Fig. 85).

PO2 will be displayed for 10 seconds, then Stop Time will be displayed for 50 seconds once each minute until PO2 decreases below 1.60, then PO2 will not be displayed.

alternate with PO2
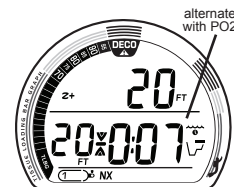
Fig. 85 - PO2 ALARM
(after Audible in Deco)

HIGH O2

> *Warning >> at 80 to 99% (240 OTU).*
> *Alarm >> at 100% (300 OTU).*

When O2 reaches the Warning level, the Audible will sound during which the O2 value with O2% icon will flash in place of Depth (Fig. 86) until the audible is silenced, then Depth will be restored. *No indication (Up Arrow) is given to ascend.*

If O2 reaches the Alarm level, the Audible will sound again during which the graphic UP, Up Arrow icon, and the O2 value with O2% icon (in place of Depth) will flash (Fig. 87). After the Audible is silenced, Depth will be restored, the graphic UP with Up Arrow icon will remain on flashing until on the surface, and the graphic O2 will replace DTR (Fig. 88).

- A (< 2 sec) to access ALTs.
- M (2 sec) to access Gas Switching (TECH only).
- S (< 2 sec) to silence/acknowledge alarms.
- S (press) to activate Smartglo® Backlight.

> ALTs are similar to No Deco.

High O2 during Deco
When O2 reaches the Warning Level, the Audible will sound during which the O2 value with O2% icon will flash in place of Depth (similar to Fig. 86) until the audible is silenced, then Depth will be restored. *No indication (Up Arrow) is given to ascend.*

If O2 reaches the Alarm level, the Audible will sound again during which the graphic UP (in place of Stop Depth), Up Arrow icon, and the O2 value with O2% icon (in place of Depth) will flash, Stop Time will display 3 dashes - : - - (Fig. 89). After the Audible is silenced, Depth will be restored, the graphic UP with Up Arrow icon will remain on flashing until on the surface, and the graphic O2 will replace Stop Time. *The full TLBG remains on solid as a reminder of Deco.*

- A (< 2 sec) to access ALTs.
- M (2 sec) to access Gas Switching (TECH only).
- S (< 2 sec) to silence/acknowledge alarms.
- S (press) to activate Smartglo® Backlight.

> ALTs are similar to Deco.

High O2 on Surface
Upon ascent to 2 FT (0.6 M) for 1 second (surfacing), the Surface Main screen is displayed (Fig. 90). During the first 10 minutes, access to the Surface ALTs is allowed with other modes and screens blocked until the 10 minutes elapse.

> If O2 is 100%, the value with O2% icon will flash on the Main in place of Surface Interval (SI) time until 10 minutes elapse, then it will alternate with SI until it is < 100% when SI will be restored.
> If you surface due to 100% O2 without having completed the Deco obligation, operation will enter VGM after 5 minutes.
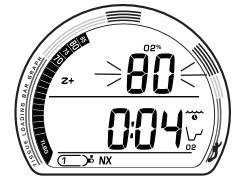
Fig. 86 - O2 WARNING
(during Audible)
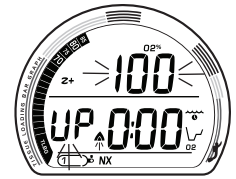
Fig. 87 - O2 ALARM
(during Audible, No Deco)
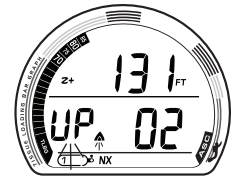
Fig. 88 - O2 ALARM
(after Audible, No Deco)
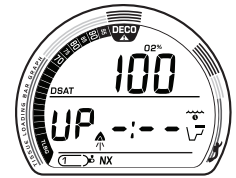
Fig. 89 - O2 ALARM
(during Audible, Deco)
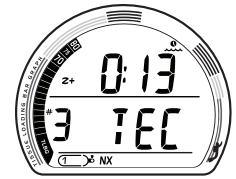
Fig. 90 - SURFACE MAIN

TECH DIVE

GAS SWITCHING

OVERVIEW

> Can only switch when a Dive Main screen is displayed.
> Cannot switch on surface.
> Cannot switch during sounding of alarms.
> All dives begin with Gas 1 and default to Gas 1 on the surface.

GAS SWITCH PREVIEW, information includes (Fig. 91, 92, 93):
> Graphics Go To (meaning switch or change to that Gas).
> Graphic AIR with FO2 icon; or if Nitrox -
  FO2 value set (21 to 100%) with FO2 icon and current PO2 level with PO2 and NX icons.
> Gas (tank) 1 (or 2, 3) icon, one in use.

- A (< 2 sec) to step forward through Preview screens.
- M (< 2 sec) to step back through Preview screens.
- S (< 2 sec) to Switch from the Gas in use to the Gas indicated (after 3 sec), then revert to Main with the new Gas selected.

Gas Switch Alarm

If a switch to the new Gas (FO2) would result in PO2 => 1.60, the Audible will sound during which a warning message will flash (Fig. 94). After it is silenced, the Preview screen will be restored.

> Due to the possibility that sufficient air may not be available in the Switch From tank, the switch will still be allowed.
> If the switch is made, and PO2 is => 1.60, the PO2 alarm will strike. If in Deco, indication to ascend will not be given (you control action to be taken).

Fig. 91 - GAS 1 PREVIEW

Fig. 92 - GAS 2 PREVIEW
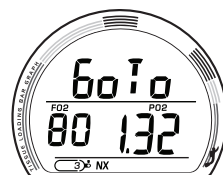
Fig. 93 - GAS 3 PREVIEW
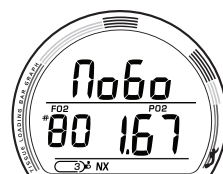
Fig. 94 - GAS SWITCH ALARM

GAUG

OP MODE

GAUG SURFACE MODE

The SURF MAIN screen will remain on display for 10 minutes during which time the unit will enter GAUG Dive Mode upon descent to 5 FT (1.5 M) for 5 seconds.

The unit will enter Post Dive Surface Mode upon ascent to 2 FT (0.6 M) for 1 second and display the Surface Main with the Surface Mode (clock/wave) icon flashing.

> Access to SURF ALT screens is allowed during the first 10 minutes with access to other surface modes/screens blocked until 10 minutes elapse. *Exception is for Violations.*

> When the 10 minute post dive surface Interval time has elapsed, access to other Surface modes/screens is allowed. If another 10 minutes of no action elapses, operation will enter PSM.

GAUG SURFACE SEQUENCE

Sequence >> SURF MAIN >> ALT 1 > ALT 2 > FLY > LOG > SET > HIST > ID.

- A (< 2 sec) to step forward through the Surface sequence.
- A (hold) to scroll forward through the Surface sequence (4/sec).
- M (< 2 sec) to step back through the Surface sequence.
- S (< 2 sec) to access selections.
- S (2 sec) to step back from a selection to the previous selection or sequence item.
- M (2 sec), or if no button is pressed during a period of 2 minutes, to revert to SURF MAIN*.
- S (press) to activate the Smartglo Backlight.

ALTs revert to the Main after 10 seconds of no button action.

- - - - - - - - - -

Some of the descriptions that follow are shared with NORM/TECH modes,

and are referenced back in those sections.

- - - - - - - - - -

GAUG SURF MAIN, information includes (Fig. 95):
> - SI (hr:min) with clock/wave icon.
> - Dive number with # icon; that operating period, up to 24 (0 if no dive made yet).
> - Graphic GAU (operating mode).
> - Battery icon, if voltage is low.

- A (< 2 sec) to step forward to ALT 1, then step through the Surface Sequence.
- A (hold) to scroll forward through the Sequence (4/sec).
- M (< 2 sec) to access ID-SN, then step back through the Sequence.
- S (press) to activate Smartglo Backlight.

Fig. 95 - GAUG SURF MAIN
(after dive # 2)

GAUG SURF ALT 1, information includes (Fig. 96):
> - Max Depth* with FT (or M) and MAX icons.
> - Elapsed Dive Time* (hr:min) with wave/clock icon.
> - LAST icon, indicating that data is from the dive previously conducted.

- A (< 2 sec) to step forward to ALT 2.
- M (< 2 sec) to step back to Main.
- 10 sec, or M (2 sec), revert to Main.
- S (press) to activate Backlight.

Dashes if no previous dive.
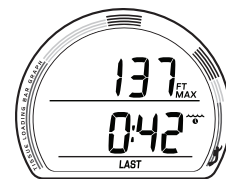
Fig. 96 - GAUG SURF ALT 1
(Last dive's data)

GAUG SURF ALT 2, information includes (Fig. 97):
> - Time of Day (hr:min) with AM (or PM) icon, no icon if 24 hour format.
> - Temperature with °F (or °C) icon.
> - Altitude graphic, if L2 (to L7), blank if Sea level.

- A (< 2 sec) to step forward to FLY.
- M (< 2 sec) to step back to ALT 1.
- 10 sec, or M (2 sec), revert to Main.
- S (press) to activate Backlight.
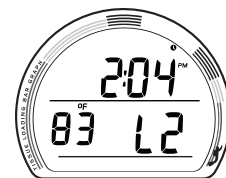
Fig. 97 - GAUG SURF ALT 2
(Last dive's data)

FLY, information includes (Fig. 98):
> Time to Fly countdown (hr:min) with FLY and clock (time) icons, dashes if no dive yet.

- A (< 2 sec) to step forward to Log Lead-in.
- M (< 2 sec) to step back to ALT 2.
- 2 minutes, or M (2 sec), revert to Main.
- S (press) to activate Backlight.
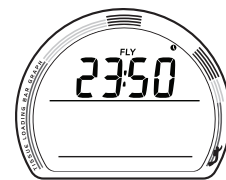
Fig. 98 - FLY

LOG - shared with NORM/TECH (see page 12).

GAUG SET GROUPS - similar to NORM/TECH (see page 13).
Sequence >> Set Lead-in >> Set OP MOD >> Set ALM >> Set UTL >> Set TME.

> GAUG does not access Set Gas (FO2).

SET GROUP LEAD-IN, information includes (similar to Fig. 23):
> Graphics Go To SET.

- S (< 2 sec) to access Set OP MOD Lead-in.
- A (< 2 sec) to step forward to History.
- M (< 2 sec) to step back to Log Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

SET OP MOD (Mode) - shared with NORM/TECH (see page 13).

SET ALM (Alarms) - shared with NORM/TECH (see page 15); no TLBG or DTR.

SET UTL (Utilities) - shared with NORM/TECH (see page 16); no DS, SS, Algorithm, or CF.

SET TME (Time/Date) - shared with NORM/TECH (see page 18).

HISTORY - shared with NORM/TECH (see page 20).

ID-SN - same as NORM/TECH (see page 20).

GAUG DIVE MODE STRUCTURE
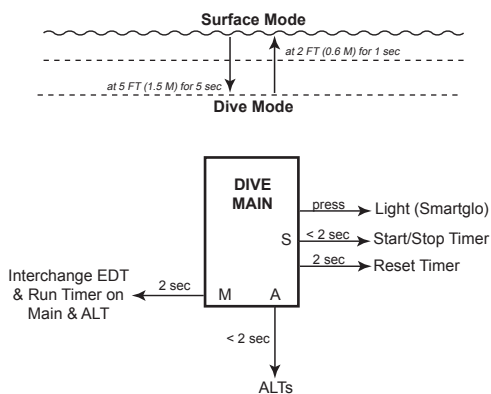
GAUG Dive Run Timer
While operating in GAUG Dive mode a Run Timer, that by default is displayed on the Dive ALT 1 screen, can be interchanged with EDT (Elapsed Dive Time) and displayed on the Main with EDT moving to the ALT 1 screen.

When the Run Timer is active, it will continue to run in the background during the first 10 minutes on the surface after a dive, then shut off with time reverting to 0:00.

GAUG DIVE MAIN, information includes (Fig. 99A/B) -
> Current Depth with FT (or M) icon.
> EDT (hr:min) with wave/clock icon, or -
  graphic RT- and Run Time with clock icon, counting up from 0:00 to 9:59 (min:sec), then from 0:10 to 5:59 (hr:min).
> VARI, while ascending.

• A (< 2 sec) to access ALT 1.
• M (2 sec) to interchange EDT with the Run Timer and move EDT to ALT 1.
• S (< 2 sec) to Start/Stop the Run Timer, if in use.
• S (2 sec) to Reset the Run Timer (to 0:00), if in use.
• S (< 2 sec) to acknowledge alarms.
• S (press) to activate Smartglo® Backlight.

GAUG DIVE ALT 1, information includes (Fig. 100A/B) -
> Max Depth with FT (or M) and MAX icons.
> Graphic RT- and Run Time with clock icon, counting up from 0:00 to 9:59 (min:sec), then from 0:10 to 5:59 (hr:min); or -
  EDT (hr:min) with wave/clock icon.

• A (< 2 sec) to access ALT 2.
• M (< 2 sec) to revert to Main.
• S (press) to activate Smartglo® Backlight.

GAUG DIVE ALT 2, information includes (Fig. 101) -
> Time of Day (hr:min) with AM (or PM) icon if 12 Hour.
> Temperature with °F (or °C) icon.

• A (< 2 sec) to revert to Main.
• M (< 2 sec) to step back to ALT 1.
• 10 sec, revert to Main if A or M is not pressed.
• S (press) to activate Smartglo® Backlight.

GAUG DELAYED VIOLATION 3 (DV3)
Upon descent deeper the MOD (Max Operating Depth) of 400 FT (120 M), the Audible will sound and the Up Arrow icon will flash (Fig. 102).

Current Depth and Max Depth will only indicate 3 dashes (- - -) signifying that you are Out of Range. The Up Arrow will flash until ascent is made above the MOD.

Upon ascending above the MOD, Current Depth will be restored, however, Max Depth will display 3 dashes for the remainder of that dive. Also, the Log for that dive will display 3 dashes as the Max Depth.

Fig. 99A - GAUG DIVE MAIN
(with EDT, default)

Fig. 99B - GAUG DIVE MAIN
(with Run Timer)

Fig. 100A - GAUG DIVE ALT 1
(Run Timer, default)
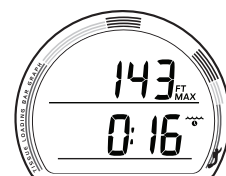
Fig. 100B - GAUG DIVE ALT 1
(with EDT)
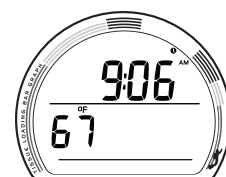
Fig. 101 - GAUG DIVE ALT 2
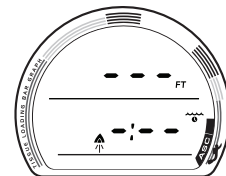
Fig. 102 - GAUG DV3 MAIN

37

FREE DIVE

OP MODE

(A300 only)

FREE SURFACE MODE

FREE dives, which are allowed prior to NORM, TECH, or GAUG dives as well as after NORM or TECH dives, calculate Ni-O2 based upon the NORM/TECH Algorithm selected and a fixed default FO2 of Air. FO2 settings for NORM/TECH dives do not affect calculations for FREE Dives.

FREE mode displays NDC Time (on a dive ALT screen) and the TLBG on surface and dive Main screens, and includes a TLBG Alarm that activates when it enters the Caution zone (14 segments).

In the event of entry into Deco during operation in FREE mode, operation reverts to VGM for 24 hours.

FREE dive alarms are set, controlled, and operate separately from NORM/TECH/GAUG Alarms.

The SURF MAIN screen remain on display for 10 minutes during which time the unit will enter Dive Mode upon descent to 5 FT (1.5 M) for 5 seconds.

The unit enters post dive Surface Mode upon ascent to 2 FT (0.6 M) for 1 second and displays the Surface Main with the Surface Mode (clock/wave) icon flashing.

Access to Surface ALT screens is allowed during the first 10 minute with access to other surface modes/screens blocked until 10 minutes elapse. *Exception is for Violations.*

When the 10 minute post dive surface Interval time has elapsed, access to other Surface modes/screens is allowed.

FREE SURFACE SEQUENCE
Sequence >> SURF MAIN >> ALT 1 > ALT 2 > FLY/DESAT > SET > ID.

- A (< 2 sec) to step forward through the Surface sequence.
- A (hold) to scroll forward through the Surface sequence (4/sec).
- M (< 2 sec) to step back through the Surface sequence.
- S (< 2 sec) to access selections.
- S (2 sec) to step back from a selection to the previous selection or sequence item.
- M (2 sec), or if no button is pressed during a period of 2 minutes, to revert to SURF MAIN.
- S (press) to activate the Smartglo Backlight.

FREE SURF MAIN, information includes (Fig. 103A/B) -
- > Surface Interval Time (min:sec) with clock/wave icon.
- > Dive number with # icon, 0 if no dive yet, and graphic FRE, or -
  graphic CD and countdown Time (min:sec) with clock icon, if the CDT is selected to be displayed.
- > Battery icon, if a Low Battery condition exists.
- > TLBG with icon, if any after NORM, TECH, or FREE dives.

- A (< 2 sec) to access CDT Status, if the CDT is not on the Main; or ALT 1, if the CDT is on the Main; then step forward through the Surface sequence.
- A (hold) to scroll forward through the Surface sequence at 4/sec.
- M (< 2 sec) to access ID-SN, then step back through the Surface sequence.
- S (< 2 sec) to Start/Stop the CDT, if on the Main. *No action if the CDT is 0:00 or it is not on the Main.*
- S (2 sec) to Reset the CDT (to the time previously set), if on the Main and stopped or 0:00. *No action if the CDT is running or it is not on the Main.*
- S (press) to activate the Smartglo Backlight.

CDT STATUS (no screen if on Main), information includes (Fig. 104) -
- > Graphic REDY (means the CDT is set & is ready to start), blank if 0:00 (not set or has counted down).
- > Graphic CD and CD Time (min:sec) with clock icon.

- S (< 2 sec) to Start/Stop the CDT. *No action if the CDT is 0:00.*
- S (2 sec) to Reset the CDT (to the time previously set) if stopped or 0:00. *No action if the CDT is running.*
- A (< 2 sec) to access Surface ALT 1, then step forward through the Surface sequence.
- M (< 2 sec) to step back to Surface Main.
- 10 sec, revert to Surface Main if no button is pressed.

FREE SURF ALT 1, information includes (Fig. 105) -
- > Max Depth* with FT (or M) and MAX icons.
- > Elapsed Dive Time* (min:sec) with wave/clock icon.
- > LAST icon, indicating that data is from the dive previously conducted.

- A (< 2 sec) to step forward to ALT 2.
- M (< 2 sec) to step back to Main.
- 10 sec, or M (2 sec), revert to Main.
- S (press) to activate Backlight.

Fig. 103A - FREE SURF MAIN
(default, without CDT)

Fig. 103B - FREE SURF MAIN
(CDT selected)

Fig. 104 - FREE CDT STATUS
(set, ready to start)

Dashes if no previous dive.
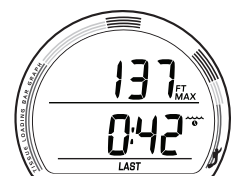
Fig. 105 - FREE SURF ALT 1

FREE SURF ALT 2, information includes (Fig. 106):
> Time of Day (hr:min) with AM (or PM) icon, no icon if 24 hour format.
> Temperature with °F (or °C) icon.
> Altitude graphic, if L2 (to L7), blank if Sea level.

- A (< 2 sec) to step forward to FLY.
- M (< 2 sec) to step back to ALT 1.
- 10 sec, or M (2 sec), revert to Main.
- S (press) to activate Backlight.
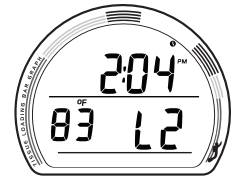
Fig. 106 - FREE SURF ALT 2

- - - - - - - - - -

Some of the descriptions that follow are shared with NORM/TECH modes,

and are referenced back in those sections.

- - - - - - - - - -

FLY/DESAT - shared with NORM/TECH (see page 11).

FREE SET GROUPS.
Sequence >> Set Lead-in >> Set OP MOD >> Set CDT >> Set ALM >> Set UTL >> Set TME.

> FREE does not access Set Gas (FO2).

SET GROUP LEAD-IN, information includes (similar to Fig. 23):
> Graphics Go To SET.

- S (< 2 sec) to access Set OP MOD Lead-in.
- A (< 2 sec) to step forward to ID-SN.
- M (< 2 sec) to step back to Fly/Desat.
- 2 minutes, or M (2 sec), revert to Main.

SET OP MOD (Mode) - shared with NORM/TECH (see page 13).

SET CDT (Countdown Timer) - separate from NORM/TECH (refer to the following).

SET ALM (Alarms) - separate from NORM/TECH (refer to the following).

SET UTL (Utilities) - shared with NORM/TECH (see page 16); no DS, SS, Algorithm, or CF.

SET TME (Time/Date) - shared with NORM/TECH (see page 18).

SET CDT (COUNTDOWN TIMER) LEAD-IN, information is to include (Fig. 107):
> Graphics Go To and CDT with SET icon.

- S (< 2 sec) to access Set CDT.
- A (< 2 sec) to step forward to Set ALM Lead-in.
- M (< 2 sec) to step back to Set OP MOD Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 107 - SET CDT LEAD-IN

SET CDT, information is to include (Fig. 108):
> Graphic CDT with SET icon, solid.
> Graphic OFF; or time value previously set (min:sec) with clock icon, Minute digits flashing.

- A (hold) to scroll upward through Minute Set Points from OFF to 0: to 9: in 1 Minute (1:) increments at 8/sec.
- A (< 2 sec) to step upward through Minute Set Points.
- M (< 2 sec) to step back through Minute Set Points.
- S (< 2 sec) to save the Minute setting and flash the Seconds digits.
- S (2 sec), if the setting is not changed, to revert to Set CDT Lead-in.
- A (hold), while the Seconds digits are flashing, to scroll upward through Set Points from :00 to :59 in 1 Second (:01) increments at 8/sec.
- A (< 2 sece) to step upward through Second Set Points.
- M (< 2 sec) to step back through Second Set Points.
- S (< 2 sec) to save the CDT setting and revert to Set CDT Lead-in.
- 2 minutes, or M (2 sec), revert to Main.
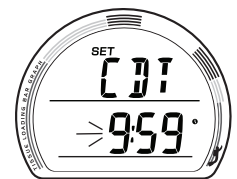
Fig. 108 - SET CDT

SET ALM (ALARMS) LEAD-IN, information is to include (Fig. 109):
> Graphics Go To and ALM with SET icon.

- S (< 2 sec) to access Set EDT Alarm.
- A (< 2 sec) to step forward to Set UTL Lead-in.
- M (< 2 sec) to step back to Set CDT Lead-in.
- 2 minutes, or M (2 sec), revert to Main.

Fig. 109 - SET CDT

SET EDT ALARM, information is to include (Fig. 110):
The FREE mode EDT Alarm is factory set for 30 seconds. When set ON, the Alarm will sound every 30 seconds while operating underwater in FREE Dive Mode.

> Graphic EDT with SET icon.
> Graphic OFF (or ON) flashing with wave/clock (EDT) icon.

- A or M (< 2 sec) to toggle between OFF and ON.
- S (< 2 sec) to save the setting and access Set D1.
- S (2 sec), if the setting is not changed, to revert to Set ALM Lead-in.
- 2 minutes, or M (2 sec), revert to Main.
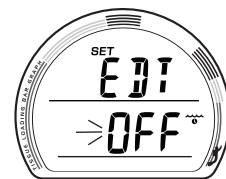
Fig. 110 - SET EDT ALARM

DEPTH ALARMS
FREE mode features 3 Depth Alarms that can be set at progressively deeper depths. It is programmed to prevent Depth 2 from being set at values equal or shallower than the setting for Depth 1 and Depth 3 from being set at values equal or shallower than the setting for Depth 2.

SET DEPTH ALARM 1 (2, 3), information is to include (Fig. 111):
> Graphic D1 (D2, D3) with SET icon.
> Graphic OFF, or ON, flashing, with Depth value last set and FT (or M) icon.

- A (< 2 sec) to step upward through the selections of OFF, ON, and SET.
- M (< 2 sec) to step back through the selections.
- S (< 2 sec) to save the selection and access Set Depth Alarm 2 if OFF or ON is saved, or flash the Depth digits if SET is saved.
- S (2 sec), if the selection is not changed, to step back to Set EDT Alarm.
- 2 minutes, or M (2 sec), revert to Main.
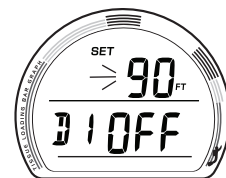
Fig. 111 - SET DEPTH ALARM

 If SET is saved and the Depth digits are flashing -
- A (hold) to scroll upward through the Set Points from 30 through 330 FT (10 to 100 M) in 10 FT (1 M) increments at 8/sec.
- A (< 2 sec) to step upward through the Set Point.
- M (< 2 sec) to step back through the Set Points.
- S (< 2 sec) to save the Depth value (solid) and flash the graphic SET, allowing ON or OFF to be selected.
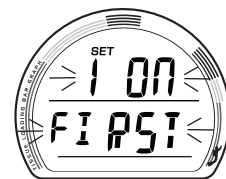
Fig. 112 - SET DEPTH ALARM MESSAGE

Setting D2 (D3) Alarms are similar with their Set Points beginning 1 increment > the D1 (D2) Alarm setting. If D1 (or D2) is set OFF, the message SET 1 (or 2) ON FIRST will be displayed flashing for 5 seconds (Fig. 112) when an attempt is made to set D2 (or D3) ON while D1 (or D2) is OFF.

HISTORY - shared with NORM/TECH (see page 20).

ID-SN - same as NORM/TECH (see page 20).

FREE DIVE MODE STRUCTURE
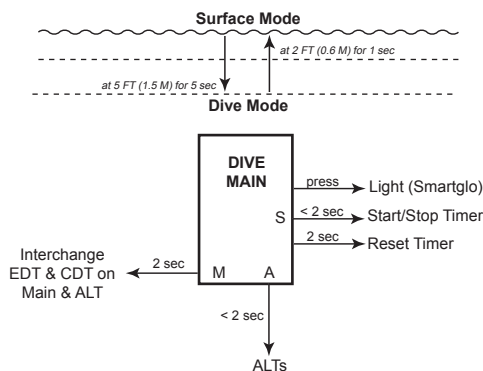
FREE Countdown Timer (CDT)
The CDT, which can only be set while on the surface, is by default displayed on the Dive ALT 1 screen. It can be interchanged with EDT (Elapsed Dive Time) and displayed on the Dive Main with EDT moving to the ALT 1 screen.

If the CDT is started and running while on the surface, it will continue to run upon entry into Dive Mode. It will also continue to run upon surfacing after a dive until shut Off or time reaches 0:00.

FREE DIVE MAIN, information includes (Fig. 113A/B) -
> Current Depth with FT (or M) icon.
> Temperature with °F (or °C) icon, if EDT is displayed.
> EDT (min:sec) up to 9:59 then dashes with wave/clock icon, or -
  graphic CD and countdown time with clock icon, counting down from time set (min:sec) before the dive to 0:00.
> TLBG, if any from FREE, NORM, or TECH dives that activation period.

• A (< 2 sec) to access ALT 1.
• M (2 sec) to interchange EDT with the CDT and move EDT to ALT 1.
• S (< 2 sec) to Start/Stop the CDT, if displayed and active.
• S (2 sec) to Reset the CDT to the time set before the dive, if in use.
• S (press) to activate Smartglo® Backlight.

FREE DIVE ALT 1, information includes (Fig. 114A/B) -
> Max Depth with FT (or M) and MAX icons.
> Temperature with °F (or °C) icon, if EDT is displayed.
> Graphic CD and countdown time with clock icon, counting down from time set (min:sec) before the dive to 0:00; or -
  EDT (min:sec) with wave/clock icon.

• A (< 2 sec) to access ALT 2.
• M (< 2 sec) to step back to Main.
• 10 sec, revert to Main if A or M is not pressed.
• S (press) to activate Smartglo® Backlight.

FREE DIVE ALT 2, information includes (Fig. 115) -
> Time of Day (hr:min) with AM (or PM) icon if 12 Hour.
> NDC (hr:min) with wave/clock/profile (DTR) icon.

• A (< 2 sec) to revert to Main.
• M (< 2 sec) to step back to ALT 1.
• 10 sec, revert to Main if A or M is not pressed.
• S (press) to activate Smartglo® Backlight.
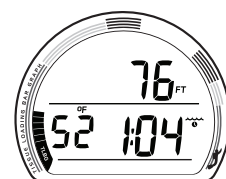
Fig. 113A - FREE DIVE MAIN
(with EDT, default)
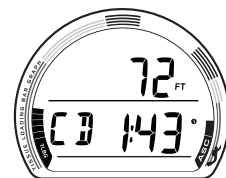
Fig. 113B - FREE DIVE MAIN
(with CDT)
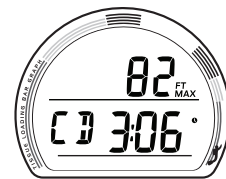
Fig. 114A - FREE DIVE ALT 1
(CDT, default)
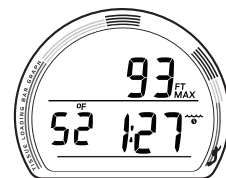
Fig. 114B - FREE DIVE ALT 1
(with EDT)
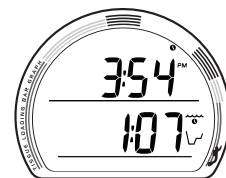
Fig. 115 - FREE DIVE ALT 2

FREE DIVE ALARMS
FREE mode alarms, which are separate from NORM (or GAUG) alarms, sound either 1 or 3 times as 3 beeps then clear. They cannot be acknowledged or silenced.

CDT Alarm
When a set Countdown Time reaches 0:00, the audible will sound during which time the graphic CD will be displayed with 0:00 (min:sec) flashing on the Main (Fig. 116). *If Temperature and EDT are on the Main, CDT replaces them during the audible then they are restored.*
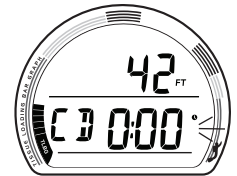
Fig. 116 - CDT ALARM

EDT Alarm
When set On, the EDT alarm activates every 30 seconds during a dive. The audible will sound during which time the EDT digits will flash on the Main (Fig. 117). *If the CDT is on the Main, EDT replaces it during the audible then the CDT is restored.*
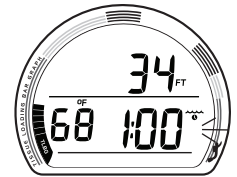
Fig. 117 - EDT ALARM

Depth Alarms
When set On, the Depth alarms (1, 2, 3) activate at their respective set Depths. The audible will sound during which time the graphic D1 (or D2, D3) will be displayed in place of Temperature or the graphic CD with the Depth digits flashing on the Main (Fig. 118). *After the audible is silent, Temperature or the graphic CD will be restored.*
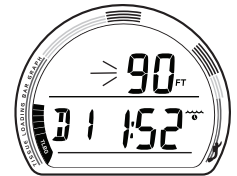
Fig. 118 - DEPTH ALARM

High Nitrogen Alarms
When nitrogen increases to the caution level (14 TLBG segments, 70%), the audible will sound during which time the TLBG segments will flash on the Main (Fig. 119).

In the event that nitrogen continues to increase and reaches the Deco level, the audible will sound again during which time all 20 segments of the TLBG, the Up Arrow icon, and the graphics UP and VIO will flash (Fig. 120).

When the audible is silent, the TLBG will be removed, the graphics and Arrow icon will continue to flash until on the surface, then UP and the Arrow will be removed.

The graphic VIO flashes until 1 minute elapses on the surface, then it alternates with FRE and operation reverts to Violation Gauge Mode for 24 hours.
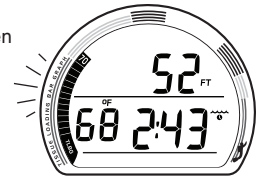
Fig. 119 - TLBG ALARM
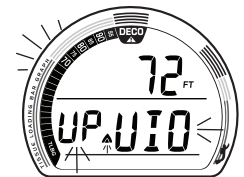
Fig. 120 - DECO ENTRY
(Violation)

REFERENCE

CAUTION: When the procedure provided in this section is used to change the Battery, you must be sure that the case o-ring is not pinched and that the unit is water tight before conducting diving actvities. Pre dive pressure testing by an Authorized AERIS facility is highly recommended.

PC INTERFACE

The A300 and A300 XT are configured with Data Ports (Fig. 121a, 122a) that enable their attachment to an Interface System capable of connection to a PC through a USB port.

A USB Driver, provided as part of the optional Interface System, must be installed on the PC.

The unit will check for an external access request every second while in Surface Mode (NORM, TECH, GAUG, or FREE).

Checks are not made if the activation contacts are wet.

When the interface cable is connected to the dive computer's Data Port and a PC USB Port, a wake up connection is established, all segments of the LCD are displayed, then a PC screen (Fig. 123) is displayed with the time counting down from 2:00 to 0:00 (min:sec) until completion of the upload/download operation at which time operation will revert to the Surface Main.

NORM, TECH, GAUG, and FREE settings that can be uploaded include -
- All Set ALM (alarms), Set UTL (utilities), and Set TME (date/time) selections.

NORM, TECH, GAUG data for each dive recorded that can be downloaded includes -
- Dive Mode - NORM, TECH, or GAUG.
- Start & End Date/Time.
- Dive Number, that activation period.
- Surface Interval time (hr:min), prior to each dive.
- Max Depth.
- Elapsed Dive Time (hr:min).
- Lowest Temperature underwater (actual between start and end).
- Average Temperature underwater (actual between start and end).
- Sampling Rate (set).
- Dive Profile (actual, expressed as dive time elapsed and depth changed).
- Set Points (for all Set selections).
- Alarms (ID & time of each strike).
- TLBG (actual, expressed as dive time elapsed).
- VARI (actual, expressed as dive time elapsed).
- O2% saturation (actual, expressed as dive time elapsed).

FREE data for each dive recorded that can be downloaded includes -
- Start & End Date/Time.
- Dive Number, within that set (series) if repetitive dives.
- Surface Interval time (min:sec), prior to each dive.
- Max Depth.
- Elapsed Dive Time (min:sec).
- Lowest Temperature underwater (actual between start and end).
- Average Temperature underwater (actual between start and end).
- Sampling Rate (fixed).
- Dive Profile, grouped for that set (series) of repetitive dives (actual, expressed as dive time elapsed and depth changed, and pre dive surface interval).
- Set Points (for all Set selections).
- Alarms (ID and time of each strike).
- TLBG (actual, expressed as dive time elapsed).

PC requirements:
- IBM®, or compatible, PC with USB Port
- Intel® Pentium 200 MHz or better microprocessor
- Microsoft® Windows® XP, Vista, or 7
- Super VGA card or compatible video graphics adaptor (256 color or greater) with a minimum 800 X 600 pixel screen area of display settings
- 16MB of available RAM
- 20MB of available hard drive storage
- Mouse
- CD Rom drive
- Printer

For software updates, refer to the AERIS web site >>>>

www.diveaeris.com

For support, call ACI Support toll free at >>>>

(866) 732-7877, 8 Am to 5 Pm USA Pacific time.

Fig. 121 - DATA PORT
(A300)

Fig. 122 - DATA PORT
(A300 XT)

Fig. 123 - COUNTDOWN

CARE AND CLEANING

Protect your unit from shock, excessive temperatures, exposure to chemicals, and tampering. Protect the lens against scratches with a Instrument Lens Protector. Small scratches will naturally disappear underwater.

- Soak and rinse the unit in fresh water at the end of each day of diving, and check to ensure that the areas around the Low Pressure (Depth) Sensor (Fig. 124a, 125a), PC Interface Data Port (Fig. 124b, 125b), and buttons are free of debris or obstructions.
- To dissolve salt crystals, soak in lukewarm water or a slightly acidic bath (50% white vinegar, 50% fresh water). After removal from the bath, place the unit under gently running fresh water and towel dry before storing.
- Transport your unit cool, dry, and protected.

Fig. 124 - CASE BACK
(A300 module)

INSPECTIONS AND SERVICE

Your A300/A300 XT should be inspected annually by an Authorized AERIS Dealer who will perform a factory prescribed function check and inspection for damage or wear. To keep the 2 year limited warranty in effect, this inspection must be completed one year after purchase (+/- 30 days).

AERIS recommends that you continue to have an inspection performed every year to ensure it is working properly. The costs of annual inspections, or inspections relating to water tight integrity, are not covered under the terms of the 2 year limited warranty.

Fig. 125 - CASE BACK
(A300 XT console)

To Obtain Service:

Take your unit to your local Authorized AERIS Dealer.

If required to return your unit to the factory:
- Obtain an RA (Return Authorization) number by contacting AERIS at 510/562-0500 or send an e-mail to service@oceanicusa.com.
- Record all dive data in the Log and/or download the data stored in memory. All data will be erased during factory service.
- Package it using a protective cushioning material.
- Include a legible note stating the specific reason for return, your name, address, daytime phone number, serial number(s), and a copy of your original sales receipt and Warranty Registration.
- Send freight prepaid and insured using a traceable method.
- Non-warranty service must be prepaid. COD is not accepted.
- Additional information is available on the AERIS web site diveaeris.com.

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The procedures that follow must be closely adhered to.
Damage due to improper battery replacement is not covered by the product's warranty.

MODULE REMOVAL FROM BOOT (A300 only)

If necessary to remove the A300 module from a console, bend the rubber console boot back to expose the edge of the module. If the boot is flexible enough to permit, you may bend it back far enough to scoop the module out with your finger. Otherwise, it may be necessary to insert a blunt screwdriver until the tip rests just underneath the module.

DO NOT pry the module from the console! Slowly increase the pressure under the module by releasing the tension on the rubber boot. The module will slide up the screwdriver and exit the console.

If the module is in a wrist boot, it will be necessary to peel the lips of the boot downward off the module while applying pressure from underneath, working it out slowly.

When the battery is removed, settings and calculations for repetitive dives are retained in
the unit's memory while a new battery is installed.

Fig. 126A - RING REMOVAL
(using cover tool)

BATTERY REPLACEMENT

The battery compartment should only be opened in a dry and clean environment with extreme care taken to prevent the entrance of moisture or dust.

To prevent formation of moisture in the battery compartment, it is recommended that the battery be changed in an environment equivalent to the local outdoor temperature and humidity (e.g., do not change the battery in an air conditioned environment, then take it outside during a hot sunny day).

Battery Cover Removal
- Turn the unit, or module, over to expose the Battery Cover.
- While applying steady inward pressure on the center of the Battery Cover, rotate the Retaining Ring 10 degrees clockwise using a cover tool (Fig. 126A) or by pressing against the upper tab of the Ring with a small blade screwdriver (Fig. 126B).
- Lift the Ring up and away from the housing, or turn the unit over to allow the Ring to drop out into your hand.
- Remove the transparent Battery Cover.

Fig. 126B - RING REMOVAL
(using screwdriver)

Battery Removal
- Remove the Retaining Bar located across the lower portion of the Battery (Fig. 127a).
- Remove the Cover O-ring. DO NOT use tools.
- Slide the Battery up and out of the battery compartment.

Fig. 127 - RETAINING BAR

Inspection
- Closely check all of the sealing surfaces for any signs of damage that might impair proper sealing.
- Inspect the buttons, lens, and housing to ensure they are not cracked or damaged.

⚠️ **WARNING: If damage or corrosion is found, return your unit to an Authorized AERIS Dealer, and DO NOT attempt to use it until it has received factory prescribed service.**

Battery Installation
- Slide a new 3 volt type CR2450 Lithium Battery, (-) negative side down into the Battery Compartment. Slide it in from the right side and ensure that it slides under the contact clip on the left rim (Fig. 128).
- Orient the Retaining Bar across the lower portion of the Battery and carefully push it down into position (Fig. 129).

Battery Cover and Retaining Ring Installation
- Lightly lubricate a new Cover O-ring* with silicone grease and place it on the inner rim of the Battery Cover (Fig. 130). Ensure that it is evenly seated.

     The O-ring must be a genuine AERIS part that can be purchased from an Authorized AERIS Dealer. Use of any other O-ring will void the warranty.

- Slide the Cover Ring, top portion first (small opening), onto your thumb.
- Carefully place the Battery Cover (with O-ring) into position on the rim of the Battery Compartment, then press it evenly and completely down into place with your same thumb.
- Maintain the Battery Cover securely in place and, using your other hand, slide the Cover Ring down off your thumb and into position around the battery compartment.
- The tabs on the Cover Ring fit down into the two slots located at the 2 and 8 o'clock positions.
- Using your fingers, turn the Ring counter clockwise 5 degrees until the tabs engage (Fig. 131), then tighten it 5 more degrees by turning it counter clockwise with the aide of the cover tool (Fig. 132A) or a small blade screwdriver (Fig. 132B).
- While tightening the Retaining Ring, exert continuous inward pressure on it until it is secured in the proper position. A small symbol located on the Ring should be aligned with the Locked symbol located on the Housing (Fig. 133a)

Inspection
- Activate the unit and watch carefully as it performs a full diagnostic and battery check, and enters Watch Mode.
- Observe the LCD display to ensure it is consistently clear and sharp in contrast throughout the screen.

⚠️ **WARNING: If there are any portions of the display missing or appearing dim, or if a Low Battery condition is indicated, return the unit to an Authorized AERIS Dealer for a complete evaluation before attempting to use it.**

RETURNING THE MODULE TO BOOT
- If the boot was fitted with a spacer and it was previously removed, replace the spacer into the boot.
- Orient the module over the opening in the boot, and dip the bottom edge into it while pressing the top edge with the palm of your hand. Stop pressing when the bottom edge of the module has just entered the boot.
- Correct the alignment of the module as needed so that it is straight.
- Press the module completely into place with your thumbs, watching the alignment, until it snaps into place.

Fig. 128 - INSERTING BATTERY

Fig. 129 - RETAINING BAR

Fig. 130 - COVER O-RING

Fig. 131 - ENGAGING TABS

Fig. 132A - SECURE COVER (using cover tool)

Fig. 132B - SECURE COVER (using screwdriver)

Fig. 133 - RING SECURE

ALTITUDE SENSING AND ADJUSTMENT

Prior to the first dive of a series of repetitive dives, Altitude (i.e., ambient pressure) is measured upon activation, then every 15 minutes until a dive is made.

> Measurements are only taken when the unit is dry.
> Two readings are taken, the second reading 5 seconds after the first. The readings must be within 1 foot (30 cm) of each other to record that ambient pressure as the current Altitude.
> No adjustments are made during any time that the Wet Contacts are bridged.

When diving in high altitude waters from 3,001 to 14,000 feet (916 to 4,270 meters), the A300 AI automatically adjusts to these conditions providing corrected Depth, and reduced No Deco and O2 Times at intervals of 1,000 feet (305 meters).

At an elevation of 3,001 feet (916 meters), Depth calibration automatically changes from feet of seawater to feet of fresh water. This is the first adjustment to the algorithm.

When the Conservative Factor feature is set On, NDLs are calculated based upon the next higher 3,000 foot (915 meter) Altitude. All adjustments for Altitudes greater than 11,000 feet (3,355 meters) are then made to allowable dive times for 14,000 feet (4,270 meters). At Sea Level, calculations are based upon an Altitude of 6,000 feet.

The A300_A300 XT will not function above 14,000 feet (4,270 meters).

ANALOG PRESSURE GAUGE (A300 XT only)

The A300 XT integrated console is configured with an analog Pressure Gauge that displays tank pressures that range from 0 to 5,000 PSI (400 BAR) in increments of 250 PSI (10 BAR).

The console is uniquely integrated so that the Smartglo backlight that illuminates the A300 XT display screen will simultaneously illuminate the screen of the pressure gauge when the S button is operated to activate the backlight.

When tank pressure decreases to 500 PSI (30 BAR), the audible will sound for 10 seconds as a warning during which the associated LED will flash.

During the sounding of the audible, the graphic Lo AIR will flash on the A300 XT dive main screen (Fig. 134).
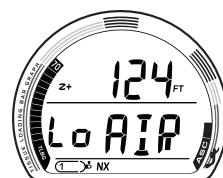
Fig. 134 - LOW PRESSURE ALARM (A300 XT only)

⚠ **WARNINGS:**

Decompression diving, or diving deeper than 130 FT (39 M), will greatly increase your risk of decompression sickness.

Decompression diving is inherently hazardous and greatly increases your risk of decompression sickness, even when performed according to the dive computer's calculations.

Using an A300 or A300 XT is no guarantee of avoiding decompression sickness.

Operation enters Violation Mode when a situation exceeds its capacity to predict an ascent procedure. These dives represent gross excursions into decompression that are beyond the boundaries and spirit of the unit's design. If you are following these dive profiles, AERIS advises that you should not use an A300 or A300 XT.

If you exceed certain limits, the unit will not be able to help you get safely back to the surface. These situations exceed tested limits and can result in loss of some functions for 24 hours after the dive in which a violation occurred.

TECHNICAL DATA

DSAT BASED NDLS (HR:MIN)
(IMPERIAL)

Altitude (feet)	0 to 3000	3001 to 4000	4001 to 5000	5001 to 6000	6001 to 7000	7001 to 8000	8001 to 9000	9001 to 10000	10001 to 11000	11001 to 12000	12001 to 13000	13001 to 14000
Depth (FT)												
30	4:20	3:21	3:07	2:55	2:45	2:36	2:28	2:21	2:15	2:10	2:04	1:58
40	2:17	1:43	1:36	1:30	1:25	1:20	1:16	1:12	1:09	1:06	1:03	1:01
50	1:21	1:03	1:00	0:58	0:55	0:52	0:48	0:45	0:43	0:41	0:39	0:37
60	0:57	0:43	0:40	0:38	0:36	0:34	0:33	0:31	0:30	0:29	0:28	0:27
70	0:40	0:31	0:30	0:28	0:27	0:26	0:24	0:23	0:22	0:20	0:19	0:18
80	0:30	0:24	0:23	0:21	0:20	0:19	0:18	0:17	0:16	0:16	0:14	0:13
90	0:24	0:19	0:18	0:17	0:16	0:15	0:14	0:13	0:12	0:11	0:10	0:10
100	0:19	0:15	0:14	0:13	0:12	0:11	0:10	0:10	0:09	0:09	0:08	0:08
110	0:16	0:12	0:11	0:10	0:09	0:09	0:08	0:08	0:08	0:07	0:07	0:07
120	0:13	0:09	0:09	0:08	0:08	0:08	0:07	0:07	0:07	0:06	0:06	0:06
130	0:11	0:07	0:07	0:07	0:06	0:06	0:06	0:06	0:05	0:05	0:05	0:05
140	0:09	0:07	0:07	0:06	0:06	0:06	0:06	0:05	0:05	0:05	0:05	0:05
150	0:08	0:06	0:06	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04	0:04
160	0:07	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04
170	0:07	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:04	0:03
180	0:06	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03
190	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03

DSAT BASED NDLS (HR:MIN)
(METRIC)

Altitude (meters)	0 to 915	916 to 1220	1221 to 1525	1526 to 1830	1831 to 2135	2136 to 2440	2441 to 2745	2746 to 3050	3051 to 3355	3356 to 3660	3661 to 3965	3966 to 4270
Depth (M)												
9	4:43	3:37	3:24	3:10	2:58	2:48	2:39	2:31	2:24	2:18	2:12	2:07
12	2:24	1:52	1:44	1:37	1:30	1:25	1:21	1:17	1:13	1:10	1:07	1:04
15	1:25	1:06	1:03	1:00	0:57	0:55	0:52	0:49	0:46	0:43	0:41	0:39
18	0:59	0:45	0:42	0:40	0:38	0:36	0:34	0:32	0:31	0:30	0:29	0:28
21	0:41	0:33	0:31	0:29	0:28	0:27	0:26	0:24	0:23	0:21	0:20	0:19
24	0:32	0:26	0:24	0:22	0:21	0:20	0:19	0:18	0:17	0:16	0:15	0:14
27	0:25	0:19	0:18	0:17	0:16	0:16	0:14	0:13	0:12	0:12	0:11	0:10
30	0:20	0:16	0:15	0:13	0:12	0:12	0:11	0:10	0:10	0:09	0:09	0:08
33	0:17	0:12	0:11	0:11	0:10	0:09	0:09	0:08	0:08	0:08	0:07	0:07
36	0:14	0:10	0:09	0:09	0:08	0:08	0:07	0:07	0:07	0:06	0:06	0:06
39	0:11	0:08	0:08	0:07	0:07	0:07	0:06	0:06	0:06	0:06	0:05	0:05
42	0:09	0:07	0:07	0:07	0:06	0:06	0:06	0:05	0:05	0:05	0:05	0:05
45	0:08	0:06	0:06	0:06	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04
48	0:07	0:06	0:06	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04
51	0:06	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:04
54	0:06	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03
57	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03

ALTITUDE LEVELS

Display: **Range:**

- SEA = Level 1 (Sea Level)   0 to 3,000 feet (0 to 915 meters)

- L2 = Level 2   3,001 to 5,000 feet (916 to 1,525 meters)

- L3 = Level 3   5,001 to 7,000 feet (1,526 to 2,135 meters)

- L4 = Level 4   7,001 to 9,000 feet (2,136 to 2,745 meters)

- L5 = Level 5   9,001 to 11,000 feet (2,746 to 3,355 meters)

- L6 = Level 6   11,001 to 13,000 feet (3,356 to 3,965 meters)

- L7 = Level 7   > 13,000 feet (3,965 meters)

Z+ BASED NDLS (HR:MIN)
(IMPERIAL)

Altitude (feet)	0 to 3000	3001 to 4000	4001 to 5000	5001 to 6000	6001 to 7000	7001 to 8000	8001 to 9000	9001 to 10000	10001 to 11000	11001 to 12000	12001 to 13000	13001 to 14000
Depth (FT)												
30	3:17	2:30	2:21	2:14	2:08	2:02	1:57	1:52	1:47	1:39	1:34	1:29
40	1:49	1:21	1:15	1:11	1:08	1:05	1:02	1:00	0:57	0:55	0:53	0:51
50	1:05	0:53	0:51	0:49	0:47	0:44	0:42	0:39	0:37	0:35	0:34	0:33
60	0:48	0:37	0:35	0:33	0:32	0:30	0:28	0:26	0:24	0:23	0:22	0:21
70	0:35	0:26	0:24	0:23	0:21	0:20	0:19	0:18	0:17	0:16	0:16	0:14
80	0:26	0:19	0:18	0:17	0:16	0:15	0:14	0:13	0:12	0:11	0:11	0:10
90	0:19	0:15	0:14	0:13	0:12	0:11	0:10	0:10	0:09	0:09	0:08	0:08
100	0:16	0:11	0:10	0:10	0:09	0:09	0:08	0:08	0:07	0:07	0:07	0:07
110	0:12	0:09	0:08	0:08	0:08	0:07	0:07	0:07	0:06	0:06	0:06	0:05
120	0:10	0:08	0:07	0:07	0:07	0:06	0:06	0:06	0:05	0:05	0:05	0:05
130	0:08	0:07	0:06	0:06	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04
140	0:07	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04
150	0:06	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03
160	0:06	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03
170	0:05	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03
180	0:05	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03
190	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:00

Z+ BASED NDLS (HR:MIN)
(METRIC)

Altitude (meters)	0 to 915	916 to 1220	1221 to 1525	1526 to 1830	1831 to 2135	2136 to 2440	2441 to 2745	2746 to 3050	3051 to 3355	3356 to 3660	3661 to 3965	3966 to 4270
Depth (M)												
9	3:37	2:41	2:31	2:23	2:16	2:10	2:04	1:59	1:54	1:50	1:43	1:37
12	1:55	1:27	1:21	1:15	1:12	1:08	1:05	1:03	1:00	0:58	0:55	0:54
15	1:08	0:55	0:53	0:51	0:49	0:47	0:44	0:42	0:39	0:37	0:36	0:34
18	0:50	0:39	0:37	0:35	0:33	0:32	0:30	0:28	0:26	0:24	0:23	0:22
21	0:36	0:28	0:26	0:24	0:23	0:21	0:20	0:19	0:18	0:17	0:16	0:16
24	0:27	0:20	0:19	0:18	0:17	0:16	0:15	0:14	0:13	0:12	0:11	0:11
27	0:20	0:16	0:15	0:13	0:12	0:11	0:11	0:10	0:09	0:09	0:09	0:08
30	0:16	0:12	0:11	0:10	0:09	0:09	0:09	0:08	0:08	0:07	0:07	0:07
33	0:13	0:09	0:09	0:08	0:08	0:07	0:07	0:07	0:07	0:06	0:06	0:06
36	0:10	0:08	0:07	0:07	0:07	0:06	0:06	0:06	0:05	0:05	0:05	0:05
39	0:09	0:07	0:06	0:06	0:06	0:06	0:05	0:05	0:05	0:05	0:05	0:04
42	0:08	0:06	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04
45	0:06	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:04
48	0:06	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03
51	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03
54	0:05	0:04	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03
57	0:05	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03

SPECIFICATIONS

CAN BE USED AS
*   Dive Computer (Air or Nitrox); A300 XT with up to 3 Gases (up to 100% O2).
*   Digital Depth Gauge/Timer.
*   Free Dive Gauge/Timer (A300 only).

DIVE COMPUTER PERFORMANCE
*   Dual Algorithm >> Buhlmann ZHL-16c based Pelagic Z+, or DSAT based.
*   No Deco limits >> closely follow PADI RDP.
*   Decompression >> in agreement with Buhlmann ZHL-16c and French MN90.
*   No Deco Deep Stops >> Morroni, Bennett.
*   Deco Deep Stops (not recommended) >> Blatteau, Gerth, Gutvik.
*   Altitude >> Buhlmann, IANTD, RDP (Cross).
*   Altitude corrections and O2 limits >> based on NOAA tables.

OPERATIONAL PERFORMANCE

Function:	Accuracy:
• Depth	±1% of full scale
• Timers	1 second per day

Dive Mode Activation:
*   Must first be activated by button press if dry.
*   Automatic by immersion in water.
*   Cannot be manually activated deeper than 4 FT (1.2 M).
*   Cannot operate at elevations higher than 14,000 feet (4,270 meters).

Unit Shutoff:
*   2 hours after activation, if no dive conducted.
*   24 hours after conducting a dive, if no further dives conducted.

Dive Counter:
*   Displays Dives #1 to 24.
*   Resets to Dive #1, upon diving (after 24 hours with no dives).

Dive Log Mode:
*   Stores 24 most recent dives in memory for viewing.
*   After 24 dives, adds 25th dive in memory and deletes the older dive.

Altitude:
*   Operational from sea level to 14,000 feet (4,270 meters) elevation.
*   Measures ambient pressure upon activation and every 15 minutes while in Surface modes.
*   Does not measure ambient pressure when wet.
*   Compensates for Altitudes above sea level beginning at 3,001 feet (916 meters) elevation and every 1,000 feet (305 meters) higher.

Power:

• Battery	(1) 3 vdc, CR2450, Lithium battery (Panasonic or equivalent).
• Shelf life	Up to 5 years.
• Replacement	User replaceable (annual recommended).
• Use Life	1 year or 300 dive hours if (2) 1 hour dives per dive day.

Battery Indicator:
*   Warning >> icon on solid when <= 2.75 volts, Battery change recommended.
*   Alarm >> icon on flashing when <= 2.50 volts, change the Battery, will not function.

Operating Temperature:
*   Out of the water >> between 20 °F and 140 °F (- 6 °C and 60 °C).
*   In the water >> between 28 °F and 95 °F (- 2 °C and 35 °C).

SPECIFICATIONS (CONTINUED)

BAR GRAPHS:

TLBG

	segments	
• No Deco Normal zone (green)	1 to 13	= 5 to 65% allowable tissue loading.
• No Deco Caution zone (yellow)	14 to 19	= 70 to 95% allowable tissue loading.
• Decompression zone (red)	20	= 100% tissue loading.

VARI

	60 FT (18 M) & Shallower			Deeper than 60 FT (18 M)		
	segments	FPM	MPM	segments	FPM	MPM
	0	0 - 10	0 - 3	0	0 - 20	0 - 6
• Normal zone (green)	1	11 - 15	3.5 - 4.5	1	21 - 30	6.5 - 9
Normal zone (green)	2	16 - 20	5 - 6	2	31 - 40	9.5 - 12
Normal zone (green)	3	21 - 25	6.5 - 7.5	3	41 - 50	12.5 - 15
• Caution zone (yellow)	4	26 - 30	8 - 9	4	51 - 60	15.5 - 18
• Too Fast zone (red)	5 (all)	> 30	> 9	5 (all)	> 60	> 18

NUMERIC DISPLAYS:

	Range:	Resolution:
• Time of Day	0:00 to 23:59 hr:min	1 minute
• PCI Countdown Timer	1:59 to 0:00 min:sec	1 second
• Altitude Level	Sea, L2 to L7	1 (level)
• Time to Fly	23:50 to 0:00 hr:min	1 minute
• Time to Desaturate	23:50 to 0:00 hr:min	1 minute
• Temperature	0 to 99°F (-18 to 60°C)	1°F (C)
• Depth (display)	0 to 400 FT (120 M)	1 FT (0.1 M)
• Surface Interval Time	0:00 to 23:59 hr:min	1 minute
• Dive Number	0 to 24	1 (dive)
• EDT	0 to 9:59 hr:min	1 minute
• DTR	0 to 9:59 hr:min	1 minute
• FO2 (1, 2, 3)	Air, 21 to 100 %	1 %
• PO2	0.00 to 5.00 ATA	.01 ATA
• O2	0 to 100 %	1 %
• Deep Stop Time	2:00 to 0:00 min:sec	1 second
• Safety Stop Time	5:00 to 0:00 min:sec	1 second
• Safety Stop Run Timer	0:00 to 9:59 min:sec	1 second
	0:10 to 5:59 hr:min	1 minute
• GAUG Run Timer	0:00 to 9:59 min:sec	1 second
	0:10 to 5:59 hr:min	1 minute
• Deco Stop Time	0:00 to 9:59 hr:min	1 minute
• Deco Total Ascent Time	0:00 to 9:59 hr:min	1 minute
• Violation Countdown Timer	23:50 to 0:00 hr:min	1 minute

FREE Mode:

• Dive Number	0 to 99	1 (dive)
• Surface Interval Time	0:00 to 59:59 min:sec	1 second
	1:00 to 23:59 hr:min	1 minute
• CDT	0:00 to 9:59 min:sec	1 second
• EDT	0:00 to 9:59 min:sec	1 second

⚠ **WARNING: If your dive computer stops working for any reason, it is important that you have anticipated this possibility and are prepared for it. This is an important reason for not pushing the no decompression and oxygen exposure limits, and a critical reason to avoid entering decompression.**

If you dive in situations where your trip would be ruined or your safety would be jeopardized by losing the use of your dive computer, a backup instrument system is highly recommended.

INSPECTION / SERVICE RECORD

Serial Number: _____

Firmware Rev: _____

Date of Purchase: _____

Purchased from: _____

Below to be filled in by an Authorized AERIS Dealer:

Date	Service Performed	Dealer/Technician

NOTES

NOTES

A300 / A300 XT

DIVE COMPUTER

OPERATING MANUAL